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Client-Initiated Violence against Zambian Female Sex Workers: Prevalence and Associations with Behaviour, Environment, and Sexual History

Kalonde Malama, MPH, PhD (cand)[1,2], Luis Sagaon Teyssier, PhD[1,2] , Rachel Parker, MSPH[3], Amanda Tichacek, MPH[3], Tyronza Sharkey, MPH, DrPH (cand) [4], William Kilembe, MD, MSc[4], Mubiana Inambao, MD, MPH[5] Matt A Price, PhD[6, 7], Bruno Spire, MD, PhD[1,2], Susan Allen, MD, MPH[3]

1) *Aix-Marseille Université, APHM, INSERM, IRD, Sciences Économiques & Sociales de la Santé et Traitement de l'Information Médicale (SESSTIM), Marseille, France.*
2) *Observatoire Régional de la Santé Provence-Alpes-Côte d'Azur (ORS PACA), Marseille, France.*
3) *Rwanda Zambia HIV Research Group, Emory University, Pathology & Laboratory Medicine, School of Medicine, Atlanta, GA, United States*
4) *Zambia Emory HIV Research Project, Rwanda Zambia HIV Research Group, Emory University, Lusaka, Zambia*
5) *Zambia Emory HIV Research Project, Rwanda Zambia HIV Research Group, Emory University, Ndola, Zambia*
6) *International AIDS Vaccine Initiative (IAVI) New York, New York, United States of America*
7) *Department of Epidemiology and Biostatistics, University of California at San Francisco, San Francisco, California, United States of America*

Correspondance to : Kalonde Malama, MPH. Institut Hospitalo-Universitaire 19-21 Boulevard Jean Moulin,13005 Marseille, France (email: kalondemalama@gmail.com)

Tel:+33413732296

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Abstract

Violence against women is a known risk factor for HIV and affects female sex workers (FSW) in sub-Saharan Africa. Little is known about the magnitude and determinants of violence against FSW in Zambia, where HIV and gender-based violence prevalence are high. We conducted a cross-sectional study, using multivariable logistic regression, to determine the prevalence and correlates of client-initiated physical violence among 419 FSW in Lusaka and Ndola. The prevalence of client-initiated physical violence was 39%. The odds of violence were higher for FSW who: lived in Lusaka; recruited clients from the street; serviced clients in the clients' homes; had a physically forced sexual debut; and had a higher client volume. Our results call for safer working spaces for FSW and violence prevention interventions for their male clients.

Key words

Physical violence; Female sex workers; Clients; HIV; Zambia

Introduction

With an estimated HIV prevalence of 36.9% (36.2-37.5), female sex workers (FSW) in sub-Saharan Africa are a high-risk group. This vulnerability is due to a combination of sociobehavioural factors such as multiple sexual partners, stigmatisation, and criminalisation (Baral et al., 2012; Ngugi, Roth, Mastin, Nderitu, & Yasmin, 2012; Scorgie et al., 2012). The discrimination and lack of legal protection around sex work also render FSW vulnerable to violence from their clients, intimate partners, and the police (Deering et al., 2014).

Violence intersects with HIV both directly and indirectly. When threatened with violence, FSW have less agency to negotiate condom use (Jewkes, Dunkle, Nduna, & Shai, 2010). And during a forced sexual act, perpetrators are unlikely to use a condom (Jewkes et al., 2010; Kouyoumdjian et al., 2013). This results in potential exposure to HIV for both FSW and perpetrators of violence. Structural violence from health institutions can deny FSW access to vital HIV prevention services based on the stigma surrounding sex work (Scorgie et al., 2013; World Health Organisation, 2005). FSW who have experienced violence therefore face mental and reproductive health consequences. These include depression, unwanted pregnancy, exposure to sexually transmitted infections (STI), and reluctance to test for STI (Sherwood et al., 2015; Tounkara et al., 2014; Wirtz et al., 2015).

In Zambia, the existing gender norms and unfavourable legal climate render FSW susceptible to violence from their male clients. 43% of Zambian women aged 15-49 report a history of physical violence, the majority of which is committed by men (Central Statistical Office (Zambia), Ministry of Health (Zambia), and ICF International, 2014). FSW in Zambia do not typically have intermediaries and often negotiate directly with clients (Zulu, Ngwenya, Silukena, Phiri, & Chiseni, 2015). Moreover, clients of FSW in Zambia are likely to be men who justify physical violence against women (Leclerc & Garenne, 2008). The Zambian penal code criminalises activities related to sex work such as loitering, soliciting and procuring.

This could force FSW to transact with clients in concealed and unsafe environments such as vehicles or the client's own home, thus elevating the risk of violence.

In two of the few published studies on sex workers in Zambia, FSW reported encountering physical, sexual, and psychological violence from their male clients (Abbott, Haberland, Mulenga, & Hewett, 2013; Agha & Nchima, 2004). However, these studies were qualitative and did not measure violence as the primary outcome or model its determinants, which is important for informing safety interventions for FSW. To address this knowledge gap, we conducted a cross-sectional study to determine the prevalence of client-initiated physical violence against Zambian FSW and its associated factors. Our study focuses on commercial sex workers, whose transactions involve a client and an exchange of money for sex.

Methods

Study participants

This cross-sectional analysis draws from baseline data collected from 419 HIV-negative FSW selected from a larger HIV-incidence cohort for high-risk women at the Zambia Emory HIV Research Project (ZEHRP). Enrolment took place between September 2012 and May 2015. Eligibility criteria included being HIV-negative, aged 18-45, and sexually active. The mean age of FSW in this study was 25, most of whom resided in Ndola (65%) and were educated up to primary school level (48%).

Study procedures

The study was approved by the Emory University Institutional Review Board (Atlanta, USA) and the University of Zambia Research Ethics Committee (Lusaka, Zambia). Seventeen community health workers and 11 peer sex workers recruited FSW from known hotspots of commercial sex work activity in the capital city Lusaka, and the Copperbelt Province city of Ndola. All study participants provided informed consent in either English or one of the local

languages- Nyanja or Bemba. Medical staff trained in psychosocial HIV counselling administered a face-to-face quantitative survey collecting information on sociodemographics and HIV risk factors.

Services offered

In addition to risk reduction counselling, participants were offered family planning counselling, condoms, and the choice of a long acting contraceptive method, i.e. intrauterine device or hormonal implant. At baseline, all FSW underwent screening for HIV, syphilis and trichomonas *vaginalis*. STI treatment was provided at no cost to the participants. All enrolled FSW received transport reimbursement to cover travel to and from the research facility. During screening and enrolment procedures, participants received food and beverages.

Outcome

FSW were asked if they had ever in their lifetime experienced physical violence from their male clients (yes or no). Client-initiated physical violence was defined as ever being struck or beaten by a paying client. We also asked FSW multiple questions (yes/no) on how they responded after experiencing violence. When we asked women to describe their reaction to experiencing violence, the following responses were recorded: 'ran away', 'called friends or strangers for help', 'stayed calm and negotiated with client', 'called the police', and 'fought back'. These response options were based on pilot study data among FSW at ZEHRP.

Explanatory variables

Potential correlates of violence were chosen from demographic variables including age, education and reason for entering sex work. Sexual history variables accounted for age at sexual debut, coercion at sexual debut, age at entry into sex work and years of experience in sex work. Behavioural indicators were self-reported alcohol use (yes or no) and number of clients in the previous month. Sexual health screening variables were condom use with clients

in the previous month, and STI test results. Environmental variables included city of residence and a series of yes or no questions on venues where FSW recruit and have sex with clients. When surveying FSW on venues where they recruited and had sex with clients, the following responses were permitted: 'bars/nightclubs', 'streets', 'lodges/hotels', 'Where FSW lives', 'Where client lives', 'cars', and 'outside'. These response options were based on pilot study data among FSW at ZEHRP.

Statistical analysis

In the descriptive phase, chi-square tests were performed to illustrate the differences in sample characteristics between FSW who experienced lifetime client-initiated physical violence and their counterparts. Bivariate logistic regression was used to test the association between the outcome variable (client-initiated physical violence) and potential covariates. All variables significant at the $p<0.25$ level in bivariate analysis were tested in multivariable analysis to ensure purposeful variable selection (Bursac, Gauss, Williams, & Hosmer, 2008). Forward stepwise multiple logistic regression was used to construct the final model with adjusted odds ratios (AOR) controlling for age and level of education. Statistical analyses were performed using Stata version 14.2 (StataCorp, College Station, Texas, USA).

Results

The median age at sexual debut was 15 with an interquartile range (IQR) of 14 to 17. The median age of entry into sex work was 18 (IQR: 16-20). FSW mainly recruited their clients from bars (95%) and the street (51%), while lodges (75%) and the client's home (42%) were the most frequented areas where sex took place. The median number of clients seen per month was 10 (IQR: 7-21). Most FSW (57%) reported inconsistent condom use with their clients (Table 1).

The prevalence of ever experiencing client-initiated physical violence was 39% (164/419). Table 1 displays differences in selected characteristics between FSW who reported experiencing physical violence from their clients versus those who did not. In bivariate analysis, report of violence was significantly higher ($p<0.05$) amongst FSW who: were physically forced into their first sexual intercourse; recruited clients on the street; provided services at the client's home or in a car; ever used alcohol; and did not always use condoms with clients. Additional factors with borderline significance ($P>=0.05$ and $p<0.1$) included living in Lusaka compared with Ndola and recruiting clients in a lodge/hotel compared to not recruiting clients in a lodge/hotel.

When confronted with violence, the majority of FSW ran away (71%) and around a third either calmly negotiated with the client (30%) or called a friend or stranger for help (32%). Only a minority of FSW called the police (13%) in the aftermath of facing physical violence from their clients, while a smaller proportion (5%) of FSW reported fighting back (Table 2). Of the 145 FSW who responded: 93 reported only one of these reactions to violence, 32 reported two reactions, 14 reported three reactions and 5 reported four reactions.

In multivariable analysis (Table 3), the odds of client-initiated violence were higher among FSW who were physically forced during their sexual debut (AOR: 2.69, 95% CI: 1.43-5.10) than those whose sexual debut occurred willingly. Having sex where the client lived increased the odds of violence (AOR: 2.94, 95% CI: 1.84-4.74) over not having sex where the client lived. FSW who practised sex work in Lusaka observed higher odds of encountering violence from clients (AOR: 2.13, 95% CI: 1.25-3.62) than their Ndola counterparts. The odds of violence increased significantly for FSW who saw 9-19 (AOR: 1.87, 95% CI: 1.07-3.25) and 20 clients or more (AOR: 2.38, 95% CI: 1.27-4.46) the month prior, compared with FSW who received up to eight clients the previous month. FSW who recruited clients from the street

experienced higher odds of violence than those who did not recruit clients from the street (AOR: 1.65, 95% CI: 1.03-2.65).

Discussion

Our study found a 39% prevalence of client-initiated physical violence against FSW. Violence was associated with a history of forced sex, client volume, venue of recruitment and venue of sex work. This high prevalence is consistent with findings from other studies, in which prevalence of workplace violence amongst FSW ranges between 32% and 75% (Deering et al., 2014). We also found that FSW rarely reported incidents of violence to the police, indicating a reluctance potentially tied to previous police mistreatment. Criminalising sex work leads FSW to practise in clandestine locations (Muldoon et al., 2017) such as their client's home, which—as demonstrated by our findings—exacerbates their risk of facing violence.

Environment as a correlate of violence

We observed that the location where FSW practised sex work was associated with violence. Lusaka-based FSW had greater odds of facing violence than Ndola-based sex workers. This could be explained by the higher level of urbanisation in Lusaka-a city of ~3,000,000 inhabitants- compared to Ndola-a city of ~500,000 inhabitants (Central Statistical Office (Zambia), 2018). Rapid urbanisation in developing settings can exacerbate socioeconomic disparities such as poor housing and low income, which could then reinforce existing attitudes in favour of gender-based violence (Patel & Burkle, 2012). However, rapid urbanisation is only one of several probable differences between Ndola and Lusaka. Our data suggest further exploration of regional or environmental differences in relation to client violence against FSW.

FSW who practised sex work in their clients' homes were highly likely to have experienced violence in our study. When in the client's home, an FSW may face a greater threat of violence due to the interplaying environmental aspects of control, concealment, and isolation (Prior, Hubbard, & Birch, 2013). In his own home, a client might feel more in control and at liberty to be violent knowing that any such act would be concealed from the public. In the client' home, an FSW is isolated from any possible intervener in the event of violence. This calls for the creation of safe indoor workspaces, where FSW can negotiate safe sex with clients and avoid violence (Krüsi et al., 2012). In what is a hostile legal climate towards sex work, legal reform is required to ensure that such spaces do not engender structural violence.

Our finding that FSW who recruit clients from the street have increased odds of violence illustrates the danger of the outdoor environment for sex workers. Other studies corroborate that sex workers who solicit clients outdoors are more prone to violence than indoor sex workers are (Katsulis, Durfee, Lopez, & Robillard, 2015; Miller, 2002; Panchal et al., 2017). This further emphasises our call for policy makers to sanction safer, regulated indoor workspaces for FSW to solicit and service clients.

Sexual history as a correlate of violence

We found that violence was correlated with having a physically forced sexual debut. One third of FSW in our cohort were either verbally or physically coerced during their sexual initiation, which on average took place at age 15. This is in line with previous studies in sub-Saharan Africa, where the prevalence of forced sexual initiation among women varies between 5.3% and 46% (Stockman, Lucea, & Campbell, 2013). Similar to our findings, others have demonstrated an association between forced sexual debut and violence against FSW (Argento et al., 2014; Erickson et al., 2017). Being sexually abused as a child can result in 're-victimisation' in adulthood (Roodman & Clum, 2001). FSW with histories of child sexual abuse may thus perceive violence as inevitable and part of sex work or sexuality in general.

Existing violence prevention interventions for adolescent girls and young women must therefore target boys and young men to discourage physical and sexual abuse towards women.

Behaviour as a correlate of violence

We discovered that the odds of violence increased progressively for FSW who reported a higher volume of clients. This highlights the danger posed by frequent interactions with male clients who—as revealed in a Zambian survey—tend to have views in favour of violence against women (Leclerc & Garenne, 2008). The primary motivation for FSW in our cohort entering the profession was financial. Hence, risk reduction interventions advocating for FSW to reduce the number of clients they see would be impractical. Our results do however support economic empowerment initiatives for FSW. As shown in Tanzania, economic empowerment can enable FSW to be more selective of their clients and thus surmount causes of vulnerability to HIV such as violence (Mantsios et al., 2018). It would also be prudent to develop educational interventions for male clients of FSW to redress the current gender norms that permit violence against women to persist.

Limitations

Our findings should be considered in light of certain limitations. Firstly, due to the cross-sectional methodology of this study, we cannot infer causality from the results obtained. Report of sexual violence was ever/never, and we were unable to determine the timing relative to the behavioural, sexual history, and environmental variables. Secondly, physical violence was self-reported and thus subject to social desirability bias, which was minimised by trained counsellors administering all surveys. Our study would have benefited from a more robust measure of violence; this could include sexual violence resulting in forced sex, and psychological violence in the form of threats and sexual coercion. Despite shedding light on client-perpetrated violence, our study lacked details on other perpetrators, i.e. intimate

partners and police officers. Lastly, an examination of structural factors would have lent credence to our data. Indicators such as previous police harassment or arrest could explain the reluctance of FSW to report violence to the police.

Generalisability and implications

Our study makes a novel contribution to the limited literature on violence against Zambian FSW. To our knowledge, this is the first quantitative study to determine the prevalence and correlates of client-initiated violence against Zambian FSW. Broadly, our results point to the global problem of violence against women; this is a pertinent public health and human rights issue, which must be eliminated through cultural, policy and legal reform. The high (39%) prevalence of client-initiated violence in our cohort underscores the need to reform oppressive policies and customs that continue to endanger FSW. Much like Zambia, most countries in sub-Saharan Africa have gender norms and legal systems that compromise the safety of FSW (Baleta, 2015). Our findings call for inclusive policies protecting the safety of FSW in sub-Saharan Africa, where gender-based violence is high and sex work remains stigmatised and criminalised.

Knowing that violence provokes poor sexual health outcomes, our findings support WHO recommendations to develop interventions targeting the dual burdens of violence and HIV (World Health Organization, 2012). The DREAMS programme (PEPFAR, USA) is one such integrated violence and HIV prevention intervention for adolescent girls and young women (aged 15-24); but, in Zambia, its coverage is limited to three cities (Lusaka, Ndola and Chingola), which represent less than 20% of the population (The President's Emergency Plan For AIDS Relief (PEPFAR), 2016). The scale up and broadening of such programmes to include sex workers could enhance the safety and sexual health of FSW. Epidemiological modelling in Kenya reveals that the elimination of violence alone could, within a decade, prevent 17% of incident HIV infections among sex workers (Shannon et al., 2015).

Conclusion

In our cohort of Zambian FSW, we found a high prevalence of client-initiated physical violence. The correlates of violence were client volume, history of forced sex, venue of recruitment and venue of sex work. This calls for behavioural risk-reduction interventions for FSW at the individual level and violence prevention programs for actual and potential male clients at the community level. Ultimately, legal and policy reform are required to create safer working environments for FSW. To help achieve this, the very frameworks that unjustly prosecute sex workers must instead direct their resources towards bringing violent clients to justice.

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Table 1. Descriptive characteristics of Zambian FSW in the study (n=419) comparing FSW who experienced client-initiated physical violence with those who did not

		Lifetime Violence		
	Total Sample (N=419) n (%)	Yes (n=164) n (%)	No (n=255) n (%)	X^2 p-value
Demographics				
Age				
18-20	127 (30)	52 (32)	75 (29)	0.497
21-25	142 (34)	50 (30)	92 (36)	
26-45	150 (36)	62 (38)	78 (35)	
Education				
None	35 (8)	17 (11)	18 (7)	0.204
Primary	202 (48)	71 (43)	131 (51)	
Secondary or higher	182 (44)	76 (46)	106 (42)	
Reason for entering sex work				
Financial	354 (84)	141 (86)	213 (83)	0.599
Nothing to do	11 (3)	4 (2)	7 (3)	
Peer pressure	17 (4)	4 (2)	13 (5)	
Other	37 (9)	15 (10)	22 (9)	
Sexual History				
Age at first sex				
≤13	78 (19)	24 (15)	54 (21)	0.288
14-15	134 (32)	59 (36)	75 (30)	
16-19	174 (41)	69 (42)	105 (41)	
20+	33 (8)	12 (7)	21 (8)	
Age at entry into sex work*[n=2]				
≤16	153 (36)	62 (38)	91 (36)	0.798
17-19	146 (35)	58 (35)	88 (34)	
20+	120 (29)	44 (27)	76 (30)	

Number of years in sex work*[n=3]				
1-3	140 (34)	55 (34)	85 (34)	0.999
4-6	125 (30)	50 (30)	75 (30)	
7-9	63 (15)	25 (15)	38 (15)	
10+	85 (21)	34 (21)	51 (21)	
Sexual debut*[n=1]				
Willingly	293 (70)	106 (65)	187 (73)	0.027
Pressured verbally	56 (13)	21 (13)	35 (14)	
Forced physically	69 (17)	37 (24)	32 (13)	
Environment				
City				
Ndola	271 (65)	98 (60)	173 (68)	0.091
Lusaka	148 (35)	66 (40)	82 (32)	
Venue of recruitment (yes vs. no)				
Bar/Nightclub	399 (95)	158 (96)	241 (95)	0.391
Street	212 (51)	96 (59)	116 (45)	0.009
Lodge/Hotel*[n=1]	135 (32)	61 (37)	74 (29)	0.085
Where FSW lives	64 (15)	28 (17)	36 (14)	0.406
Venue of sex work (yes vs. no)				
Where FSW lives*[n=2]	121 (29)	54 (33)	67 (26)	0.138
Where client lives	178 (42)	92 (56)	86 (34)	0.001
Lodge/Hotel	315 (75)	129 (79)	186 (73)	0.186
Car	97 (23)	49 (30)	48 (19)	0.009
Outside	109 (26)	47 (29)	62 (24)	0.322
Behaviour				
Ever use alcohol*[n=3]				
No	91 (22)	27 (17)	64 (25)	0.040
Yes	325 (78)	135 (83)	190 (75)	
Number of clients in previous month*[n=61]				

≤8	131 (36)	40 (30)	91 (40)	0.160
9-19	128 (36)	53 (40)	75 (33)	
20+	99 (28)	39 (30)	60 (27)	
Sexual health screening				
Condom use with clients in previous month				
Always	85 (20)	32 (19)	53 (21)	0.012
Sometimes	238 (57)	106 (65)	132 (52)	
Never	96 (23)	26 (16)	70 (27)	
Syphilis*[n=11]	40 (10)	12 (7)	28 (11)	
Negative	368 (90)	149 (93)	219 (89)	0.197
Positive	40 (10)	12 (7)	28 (11)	
Trichomonas *vaginalis**[n=15]				
Negative	370 (92)	145 (92)	225 (91)	0.913
Positive	34 (8)	13 (8)	21 (9)	

*Missing values

Yes vs. no: for venues of recruitment and sex work, only ‘yes’ responses are presented

Table 2. FSW response to client-initiated physical violence (N=145*, multiple responses permitted)

Response to violence	n (%)
Ran away	103 (71)
Called friends or strangers for help	46 (32)
Stayed calm and negotiated with client	43 (30)
Called the police	19 (13)
Fought back	5 (4)

*Missing values: n=19

Table 3. Adjusted and unadjusted correlates of client-initiated physical violence against Zambian FSW (N=419)

	Client-Initiated Physical Violence			
	Crude OR	95% CI	Adjusted OR	95% CI
Demographics				
Age				
18-20	1	-	-	-
21-25	0.78	0.48-1.28	-	-
26-45	1.02	0.62-1.64	-	-
Education				
None	1	-	-	-
Primary	0.57	0.28-1.18		
Secondary or higher	0.76	0.37-1.57	-	-
Reason for entering sex work				
Financial	1	-	-	-
Nothing to do	0.86	0.25-3.00	-	-
Peer pressure	0.46	0.15-1.45	-	-
Other	1.02	0.52-2.05	-	-
Sexual History				
Age at first sex				
≤13	1	-	-	-
14-15	1.77	0.98-3.19	-	-
16-19	1.48	0.84-2.61	-	-
20+	1.29	0.55-3.03	-	-
Age at entry into sex work				
≤16	1	-	-	-
17-19	0.97	0.61-1.54	-	-
20+	0.85	0.52-1.39	-	-
Number of years in sex work				

1-3	1	-	-	-
4-6	1.03	0.63-1.69	-	-
7-9	1.02	0.55-1.87		
10+	1.03	0.59-1.79	-	-
Sexual debut				
Willingly	1			
Pressured verbally	1.06	0.59-1.91	0.60	0.42-1.66
Forced physically	2.04	1.20-3.46**	2.69	1.43-5.10**
Environment				
City				
Ndola	1	-	-	-
Lusaka	1.42	0.94-2.14	2.13	1.25-3.62**
Venue of recruitment (ref=no)				
Bar/Nightclub	1.53	0.58-4.06	-	-
Street	1.69	1.14-2.52**	1.65	1.03-2.65*
Lodge/Hotel	1.44	0.95-2.18	-	-
Where FSW lives	0.72	0.47-1.11	-	-
Venue of sex work (ref=no)				
Where FSW lives	1.38	0.90-2.12	-	-
Where client lives	2.51	1.68-3.76***	2.94	1.82-4.74***
Lodge/Hotel	1.37	0.86-2.18	-	-
Car	1.84	1.16-2.91**	-	-
Behaviour				
Ever use alcohol				
No	1	-	-	-
Yes	1.68	1.02-2.78*	-	-
Number of clients in previous month				
≤8	1	-	-	-
9-19	1.69	0.96-2.68	1.87	1.07-3.25*

20+	1.48	0.85-2.56	2.38	1.27-4.46**
Sexual health screening				
Condom use with clients in previous month				
Always	1	-	-	-
Sometimes	1.33	0.80-2.21	-	-
Never	0.61	0.32-1.15	-	-
Syphilis				
Negative	1	-	-	-
Positive	0.63	0.31-1.23	-	-
Trichomonas *vaginalis*				
Negative	1	-	-	-
Positive	0.96	0.47-1.98	-	-

*p-value < 0.05, **p-value < 0.01, ***p-value < 0.001

OR: odds ratio; AOR: adjusted odds ratio; Model adjusted for age and education

Ref: reference category, i.e. FSW who respond 'no' to questions on specific venues of recruitment and sex work