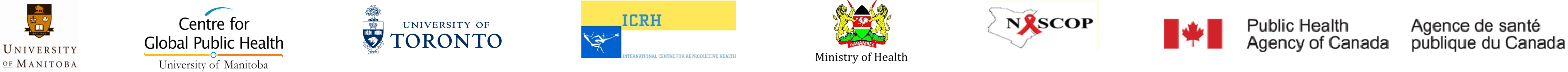


HIV Prevalence in At-Risk Adolescent Girls and Young Women in Kenya Across Locations Associated with Sex Work

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Background

- Adolescent girls and young women (AGYW) experience high rates of HIV-associated vulnerabilities and a disproportionate risk of HIV acquisition. In Kenya, the HIV prevalence among AGYW was 5.4% in 2016.
- Female sex workers (FSWs) over the age of 18 in Kenya had a prevalence of 29.5% in 2010.
- HIV prevalence is influenced by biological, behavioural and structural factors. Very little is known about the intersection between FSWs and AGYW, including overlapping risk and how location influences HIV acquisition.

Objective

- We sought to understand HIV prevalence among at-risk AGYW in Kenya and the relative importance of location and subgroup.

Methods

- We conducted a cross-sectional survey among AGYW aged 14-24 years in Mombasa, Kenya in 2015/16.
- Using probabilistic sampling we recruited participants from hotspots where female sex workers (FSWs) solicit clients, divided into venue-based (bars/brothels/hotels/brew dens) and non-venue-based (streets/public places) hotspots.
- We measured HIV prevalence using dried blood spot serology testing and examined predictors of risk including subgroup: engagement in formal sex work; transactional sex (TS, exchange of sex for goods/money without pre-negotiation of price) and casual sex (CS, did not self-identify as FSW or engaging in TS).
- We used the Kruskal-Wallis test to test for equality of medians between groups, and Chi-squared test for proportions and logistic regression to compare factors associated with risk in venue-based and non-venue-based participants after adjusting for age. The multivariate model was constructed using backwards stepwise regression and Akaike Information Criterion.
- All analyses were conducted using R 3.6.0

Results

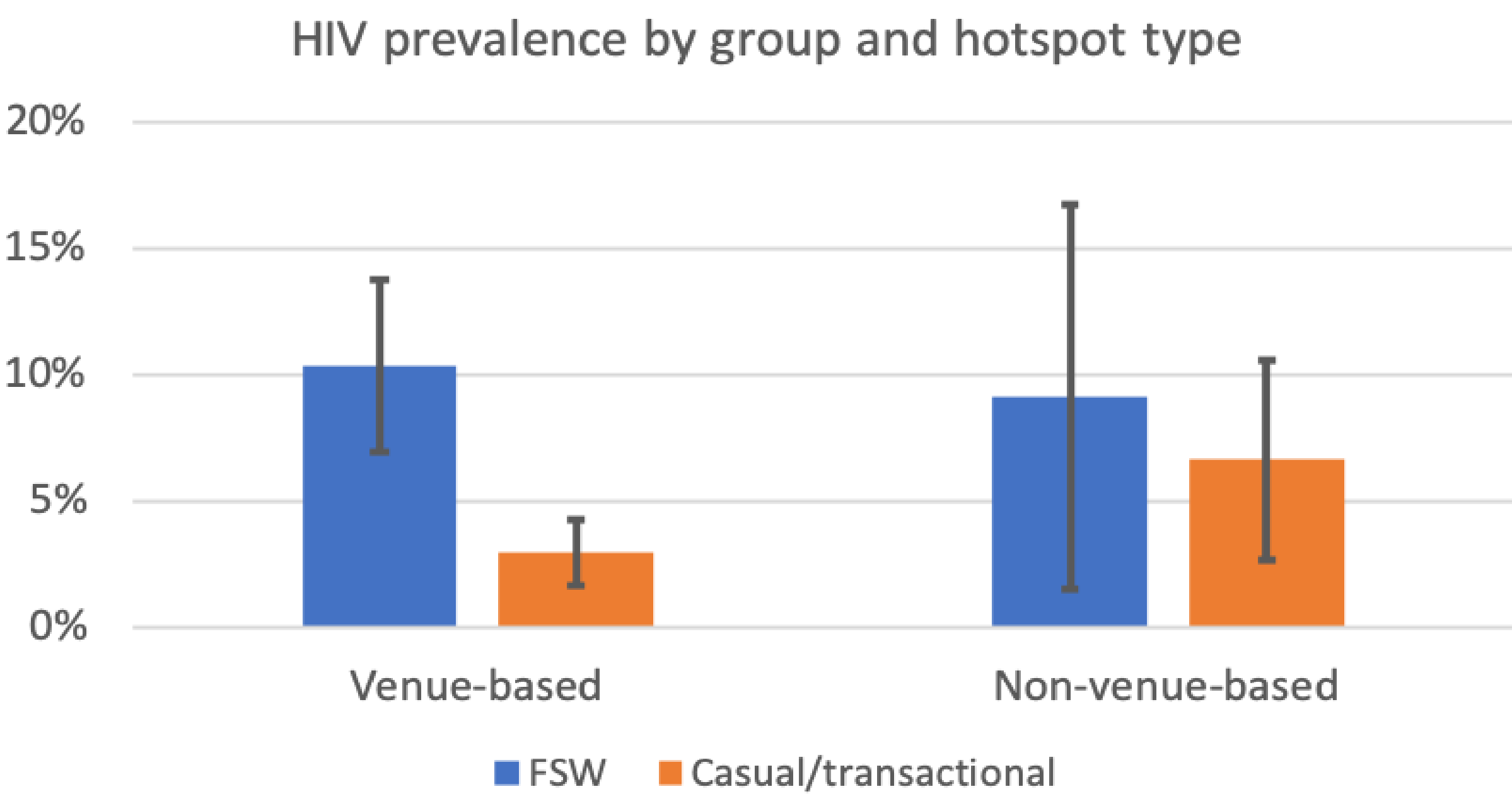
Table 1: Socio-demographic and sexual characteristics among participants

	Overall	FSW		CS/TS		p-value
		Venue-based	Non-venue based	Venue-based	Non-venue based	
	N=1193	N=310	N=55	N=677	N=151	
Age, Median (IQR)	19 (17-21)	20 (18-22)	20 (17-22)	19 (17-21)	19 (17-21)	<0.001
Age at first sex, Median (IQR)	16 (14-18)	15 (14-17)	15 (13-17)	16 (15-17)	16 (15-18)	<0.001
Literate, n (%)	1157 (97.1%)	301 (97.1%)	53 (96.4%)	655 (96.1%)	148 (98.0%)	0.640
Ever married, n (%)	82 (6.9%)	26 (8.4%)	2 (3.6%)	47 (6.9%)	7 (4.6%)	0.360
Alcohol consumption (past month)						
None	686 (57.5%)	64 (20.7%)	11 (20.0%)	493 (72.9%)	118 (78.1%)	<0.001
Sometimes	386 (32.4%)	153 (49.5%)	29 (52.7%)	172 (25.4%)	32 (21.2%)	
Daily/almost daily	119 (10.0%)	92 (29.8%)	15 (27.3%)	11 (1.6%)	1 (0.7%)	
Ever experience physical violence, n (%)	215 (18.1%)	91 (29.5%)	19 (34.5%)	88 (13.1%)	17 (11.3%)	<0.001
Ever experience sexual violence, n (%)	246 (20.8%)	89 (29.1%)	17 (30.9%)	117 (17.4%)	23 (15.3%)	<0.001
Ever HIV test, n (%)	1028 (86.5%)	294 (95.1%)	50 (90.9%)	551 (81.8%)	133 (88.7%)	<0.001

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- As shown in Table 1, the median age at first sex among participants was 19 years (IQR 17-21).
- Approximately 20% of AGYW had experienced physical and/or sexual violence, with significantly more FSWs reporting experiences of violence.
- Most AGYW had tested for HIV at some point with more FSWs reporting ever testing.



- Overall HIV prevalence was 5.6%, with highest prevalence among venue-based FSWs (10.3%), and lowest among venue-based AGYW engaging in CS and TS (2.9%).

Table 2: Determinants of HIV risk

	Univariate analysis			Multivariate analysis		
	OR	95% CI	p-value	AOR	95% CI	p-value
Age	1.21	1.09-1.34	<0.001*	1.15	1.04-1.29	0.008*
Group/hotspot type						
FSW & Venue Based	Ref.	-	-	Ref.	-	-
FSW & Non-Venue Based	0.87	0.29-2.16	0.78	0.91	0.30-2.32	0.862
TS/CS & Venue Based	0.26	0.15-0.47	0.20	0.33	0.18-0.60	<0.001*
TS/CS & Non-Venue Based	0.62	0.28-1.25	<0.001*	0.79	0.35-1.65	0.548
Literate	0.22	0.10-0.56	<0.001*	0.21	0.09-0.56	0.001*
Ever married	1.36	0.51-3.01	0.49			
Alcohol consumption (past month)						
None						
Daily/almost daily	3.52	1.78-6.76	<0.001*			
Sometimes	1.69	0.96-2.96	0.066			
Ever experience physical violence	2.02	1.15-3.43	0.012*			
Ever experience sexual violence	2.47	1.45-4.12	<0.001*	2.25	1.30-3.82	0.003*
Ever HIV test	5.24	1.62-32.2	0.022*			

*denotes p-value <0.050. Only variables in the final multivariate model have ORs shown in the multivariate analysis.

- Age, history of sexual violence, and non-literacy were associated with HIV.
- Location only seemed to impact HIV risk among AGYW engaging in TS and CS in venue-based locations.

Conclusions & Implications

- We identified a high prevalence of HIV among AGYW congregating in hotspots for FSW, with heterogeneity across subgroups.
- Determinants of HIV varied by type of location suggesting that one's environment is an important contributor to risk, and HIV programs should take this into consideration for designing delivery of interventions.