

Prevalence of HIV and sexually transmitted infections among female sex workers in a rural setting in KwaZulu-Natal, South Africa

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Disclosure

None

WCE

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Background

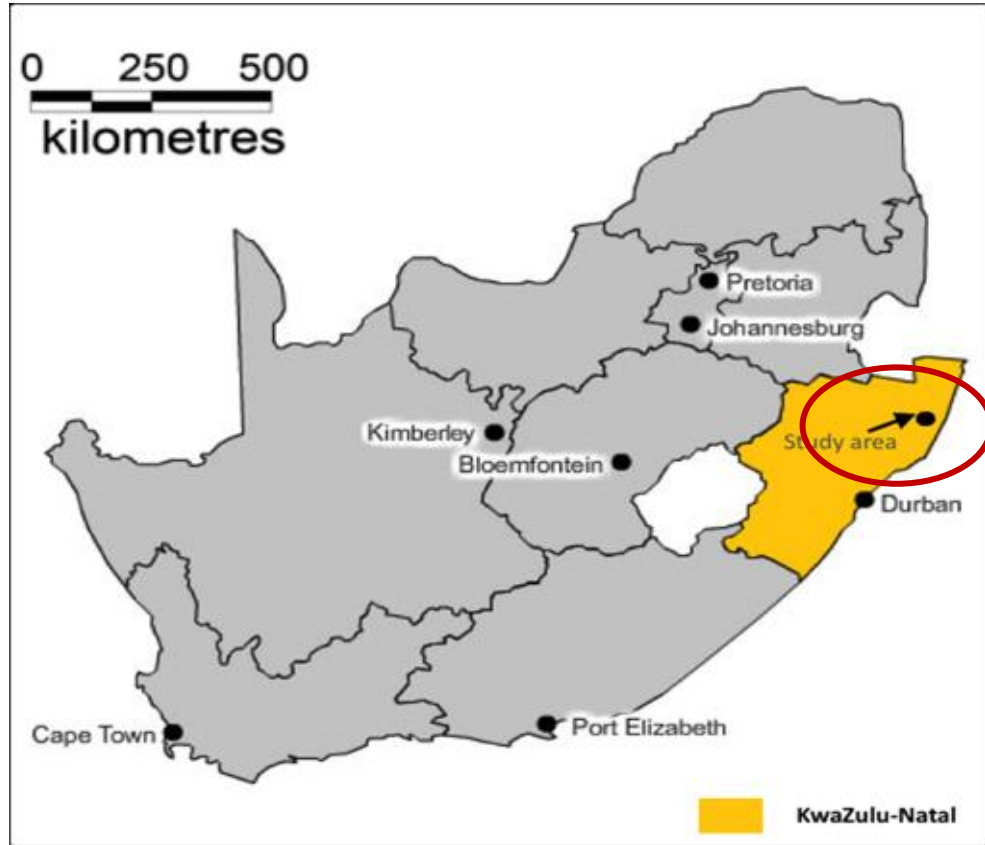
- High HIV prevalence among female sex workers (FSWs) is well-documented in South Africa, but most research is urban-focused [1-3].
- Economic shifts in Umkhanyakude District have increased sex work, especially among youth.
- ~14% of young women in the district engage in selling sex or sex work [4].
- There are effective evidence-based interventions to mobilise and empower FSWS and reduce the impact of HIV amongst FSWS, but they are mainly in urban settings.

Study aim

To understand the service delivery gap and estimate the prevalence of sexually transmitted infections (STIs), untreated HIV and risk of acquiring HIV among female sex workers in a rural South African setting.

Methods

Setting



Tlou *et al.*, PLoS One (2017)

Sample recruitment

- Mapping exercises
- Respondent-driven sampling (RDS).
 - 8 seeds, recruiting 193 FSWs (Nov 2021 – June 2022).
 - 2 coupons to recruit others.

Data Collection

- Sociodemographic and psychosocial data.
- Sexual behaviours and sex work characteristics.
- Biological samples: dry blood spots for HIV testing and self-taken vaginal swabs for chlamydia, gonorrhoea, and trichomonas.

Methods

Key definitions

- **Sex work:** Any sex exchange for money, goods and or services
- **Transmissible HIV:** Living with HIV and a viral load >50 copies/ml.
- **Acquirable HIV:** HIV-negative, any condomless sex in the past 12 months, and not on HIV Pre-Exposure Prophylaxis (PrEP).

Data analysis

- RDS-weighted prevalence of key outcomes.
- All analyses were conducted in R and used the RDS package.

Results: RDS diagnostics

- **Recruitment Waves:** 15 waves completed.
- **Seed Characteristics:** 75% of seeds were HIV-positive.
- **Convergence:** HIV status took longer to stabilise but eventually did, indicating reliable estimates.
- **Bottlenecks:** No major recruitment bottlenecks observed.
- **Recruitment homophily across outcomes:** Minor (ranged from 0.96 to 1.06)

Results: Survey

	Total (n=201)
Sociodemographic factors	
<i>Age, median (IQR)</i>	31 (25 - 37)
<i>Age of entry into any form of sex work, median (IQR)</i>	23 (20 - 30)
<i>Recent sex work initiation (≤ 3 years)</i>	65 (32%)
<i>Education</i>	
No formal schooling	1 (0.5%)
Primary school	17 (8.5%)
Some secondary school	104 (52%)
Matric	76 (38%)
College/tertiary	2 (1%)
<i>Food insecurity</i>	132 (66%)
Interpersonal factors	
<i>i. Sexual violence</i>	
Forced sex by clients/intimate partner	14 (7.0%)
<i>ii. Sexual behaviours</i>	
Any condomless sex with clients	43 (21%)
Any condomless sex with intimate partner(s)	94 (53%)

<i>Alcohol use</i>	
Never	31 (15%)
Once a month or less	50 (25%)
2 to 4 times a month	30 (15%)
2 to 3 times a week	40 (20%)
4 or more times a week	50 (25%)
Sexual health factors	
<i>HIV status</i>	
Negative	77 (38%)
Positive	124 (62%)
<i>Use antiretroviral therapy (ART)</i>	118 (95%)
<i>Virally suppressed (if on ART)</i>	105 (89%)
<i>Ever used PrEP (if HIV-negative)</i>	7 (8%)
<i>STI symptoms and treatment</i>	
Any STI symptoms (self-reported), the past 12 months	112 (56%)
Completed STI treatment, in past 12 months	48 (44%)

RDS-weighted STI & HIV prevalence

	n/N	Unweighted prevalence	RDS-weighted prevalence
Any STI	68/201	34%	29% (23% - 36%)
Chlamydia	38/201	19%	16% (11% - 21%)
Gonorrhoeae	18/201	9%	7% (3% - 12%)
Trichomonas vaginalis	44/201	22%	17% (11% - 23%)
HIV	124/201	62%	59% (52% - 67%)
Virally suppressed (if on ART & viral load<50 copies/ml)	105/118	89%	81% (68% - 90%)
Acquirable HIV (if HIV negative)	63/77	82%	80% (70% - 89%)
Transmissible HIV (if HIV positive)	20/124	16%	20% (11% - 32%)

STI diagnosis by HIV status

STI	HIV status		Comparison P-value
	Negative (N=77)	Positive (N=124)	
	n/N (RDS-weighted%)	n/N (RDS-weighted%)	
Gonorrhoea			0.427
Negative	72/77 (92%)	112/124 (92%)	
Positive	5/77 (8%)	12/124 (8%)	
Chlamydia			0.352
Negative	61/77 (81%)	104/124 (85%)	
Positive	16/77 (19%)	20/124 (15%)	
Trichomonas			0.188
Negative	64/77 (86%)	93/124 (78%)	
Positive	13/77 (14%)	31/124 (22%)	
Any STI			0.294
Negative	54/77 (74%)	78/124 (67%)	
Positive	23/77 (26%)	45/124 (33%)	

Summary

- High burden of HIV, STIs and sexual violence among FSWs in rural KZN.
- HIV virological suppression levels are high and so marginal onward transmission risk
- Despite excellent biomedical HIV prevention tools, there is still suboptimal HIV prevention and high acquirable HIV prevalence.
- Urgent need for FSW **interventions** to reduce the HIV acquisition, including longacting PrEP and increase. STI diagnosis and treatment amongst FSWs in rural areas.

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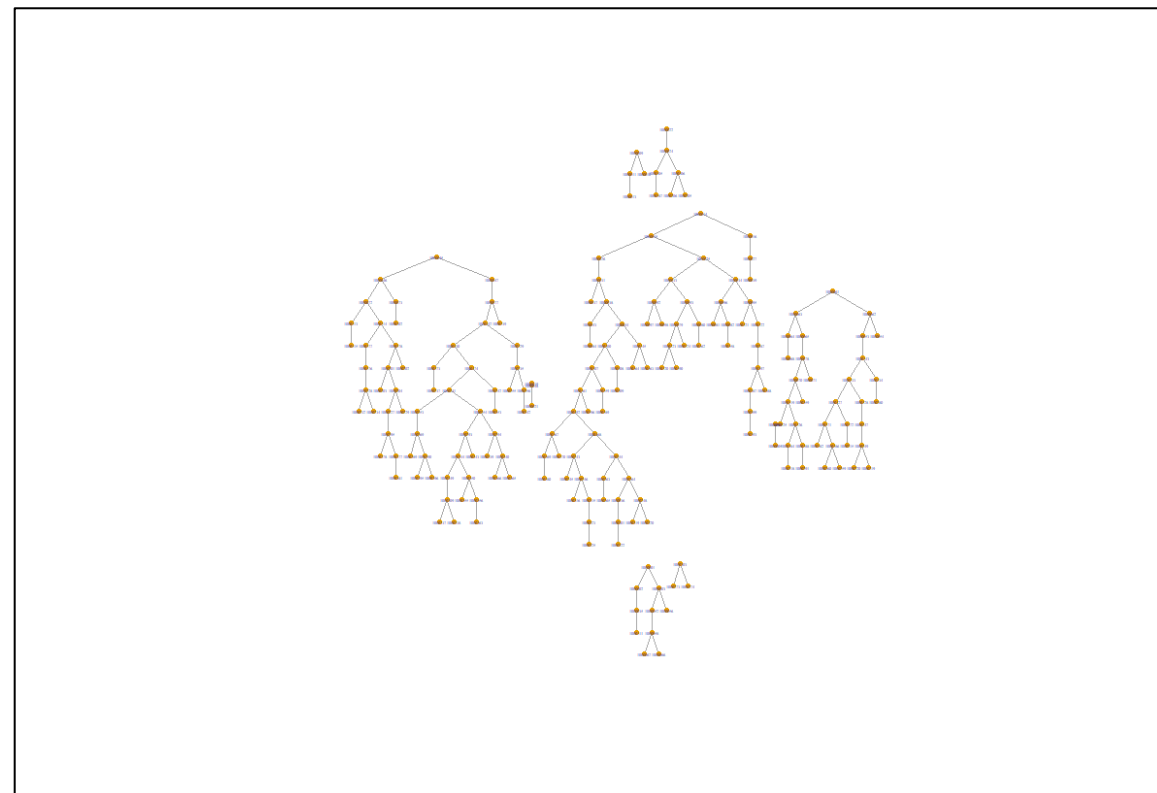
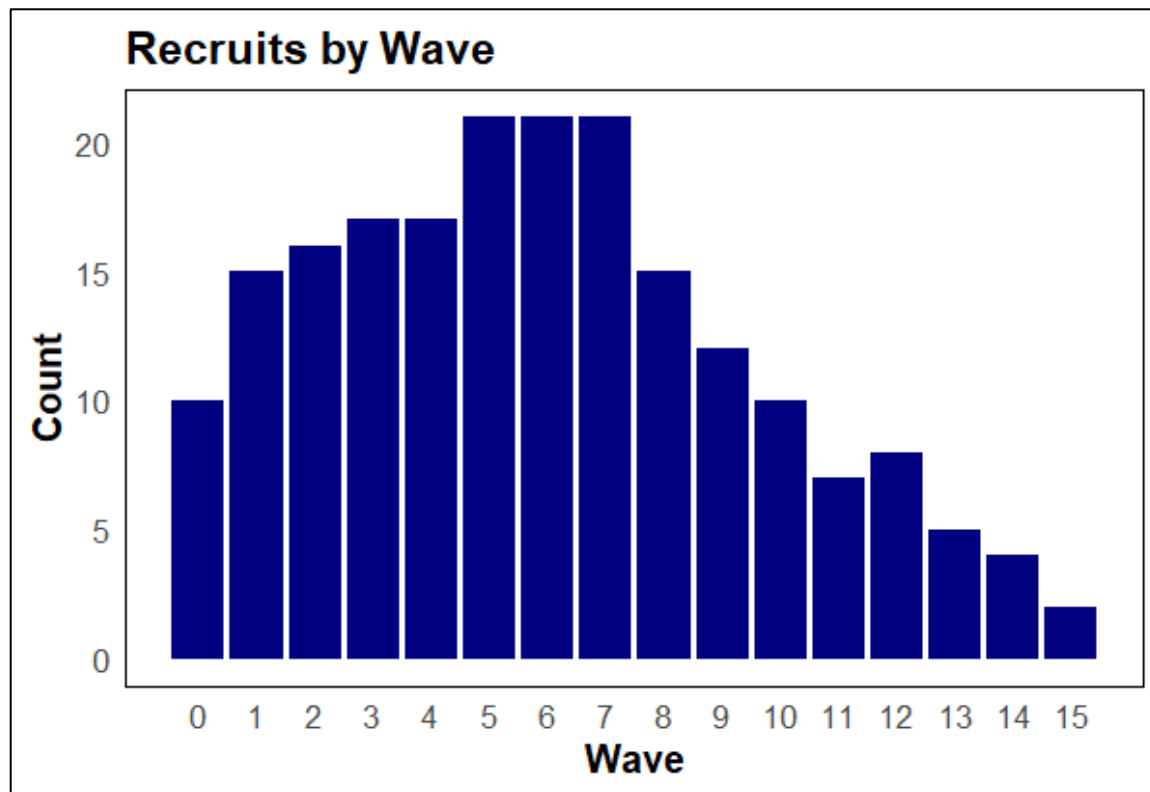
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Thank you
for listening

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Extra slides

RDS Diagnostics



RDS Diagnostics

OUTCOME	HOMOPHILY VALUE	P-VALUE
HIV status	1.07	0.252
Transmissible HIV	1.05	0.612
Acquirable HIV	1.02	0.338
Any STI	1.03	0.615
Chlamydia	0.96	0.2
Gonorrhoea	1.03	0.036
Trichomonas	1.06	0.081

RDS Diagnostics

