ESTIMATING THE BURDEN OF MULTIPLE STRUCTURAL RISK FACTORS AMONG PEOPLE WHO INJECT DRUGS USING KEY POPULATION SURVEYS IN SUB-SAHARAN AFRICA

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Abstract

Background:

Structural risk factors can act as barriers to HIV prevention and treatment for people who inject drugs (PWID), but there is little evidence on their burden from sub-Saharan Africa (SSA). We estimated the prevalence of nine different structural factors among PWID in SSA.

Methods:

We analysed 19 surveys of PWID from 15 African countries (20,021 participants; surveys conducted: 2014-2022) that reported on >=1 structural factors relating to stigma, violence, criminal justice involvement, and homelessness. We pooled survey-specific estimates for exposure to each factor, overall and by gender, using random-effects meta-analysis. Where a country contributed multiple surveys, we used a multilevel model, adding a country-level random intercept. Separate analyses were done for recent (<=12 months) and lifetime exposure. Pooling was restricted to structural factors with >=3 surveys. We present pooled proportions and female-to-male prevalence ratios (PRs).

Results:

About a qurter of PWID reported ever avoiding or being denied healthcare due to injecting drug use (IDU; 23.7%; 95%CI: 4.9-64.9%), while over a quarter felt excluded from family activities due to IDU (28.4%; 12.8–51.8; Figure). Lifetime verbal, physical, and sexual abuse were reported by 28.8% (11.6-55.4%), 19.5% (7.6–41.7%) and 10.5% (1.9–41.3%) respectively. For criminal justice involvement, 17.7% (0.7-87.1%) reported ever being harassed by the police, 37.2% (21.4–56.4%) ever being arrested for drug use and 57.0% (33.4–77.8%) ever being imprisoned. A smaller fraction (11.5%; 95%CI: 4.9–24.6%) reported recent homelessness. Overall, three-quarters of PWID reported lifetime exposure to at least one structural factor (78.7%; 62.7–89.1%). All pooled proportions showed high heterogeneity. Females had considerably higher exposure to recent sexual violence (PR: 4.17; 95% CI:1.58–10.98) while imprisonment was higher in males (PR:0.69; 95%CI:0.44–1.09). Other gender differences were modest or inconclusive**.**

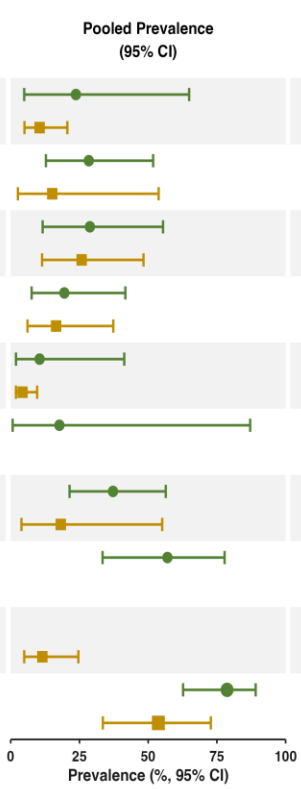
Conclusion:

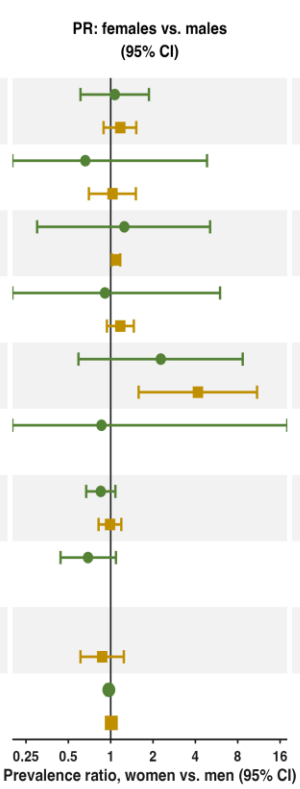
PWID in SSA are exposed to numerous structural risk factors, often at high levels. Structural interventions are needed to reduce these barriers to HIV care.

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Structural factors experienced by PWID in 15 sub-Saharan African countries

Structural factor	n Ever	n Past 12 mo	N analysed Ever	N analysed Past 12 mo	Pooled Prevalence (95% CI)	I^2 (%) Ever	I^2 (%) Past 12 mo	n Ever	n Past 12 mo	N analysed Ever	N analysed Past 12 mo	PR: females vs. males (95% CI)	I^2 (%) Ever	I^2 (%) Past 12 mo
Avoided / denied healthcare	7	9	5,434	6,397	23.7 (4.9–64.9)	99.7	98.6	6	8	5,031	5,997	1.07 (0.61–1.87)	77.7	0.0
					10.5 (5.0–20.6)							1.17 (0.89–1.52)		
Excluded from family activities	5	7	3,155	6,231	28.4 (12.8–51.8)	98.5	99.7	4	6	2,757	5,833	0.66 (0.09–4.84)	95.5	23.1
					15.1 (2.6–53.8)							1.03 (0.70–1.51)		
Verbally harassed or abused	5	9	5,470	10,686	28.8 (11.6–55.4)	99.3	99.7	4	8	5,063	10,279	1.25 (0.30–5.09)	76.5	0.0
					25.8 (11.4–48.3)							1.09 (1.02–1.17)		
Physically harassed or abused	5	11	5,475	11,308	19.5 (7.6–41.7)	99.0	99.6	4	10	5,064	10,897	0.91 (0.14–5.99)	96.9	46.4
					16.5 (6.1–37.3)							1.17 (0.94–1.46)		
Sexually assaulted / forced sex	5	14	5,860	17,760	10.5 (1.9–41.3)	99.4	99.3	5	13	5,860	17,348	2.27 (0.59–8.68)	95.3	94.8
					4.3 (1.9–9.6)							4.17 (1.58–10.98)		
Harassed by police	3	2	900	407	17.7 (0.7–87.1)	98.3	—	3	2	900	407	0.86 (0.04–20.94)	19.7	—
					—							—		
Arrested (drug use / possession)	11	10	9,318	10,416	37.2 (21.4–56.4)	99.5	99.8	10	9	8,903	10,001	0.85 (0.67–1.08)	51.9	0.0
					18.2 (3.9–55.1)							0.99 (0.82–1.19)		
Imprisoned	10	2	3,962	140	57.0 (33.4–77.8)	99.1	—	9	2	3,551	140	0.69 (0.44–1.09)	74.8	—
					—							—		
Homelessness / unstably housed	2	12	731	9,236	—	—	99.3	2	11	731	8,815	—	—	44.3
					11.5 (4.9–24.6)							0.87 (0.61–1.24)		
Any structural factor	16	17	12,404	17,203	78.7 (62.7–89.1)	99.6	99.8	15	16	11,989	16,823	0.97 (0.93–1.01)	6.4	5.2
					53.7 (33.5–72.8)							1.01 (0.96–1.06)		





● Ever ■ Past 12 months

CI = confidence interval; I^2 = heterogeneity statistic; n = number of surveys; PR = prevalence ratio; PWID = people who inject drugs. — = pooled estimate not shown (k < 3 surveys).

Countries included: Benin, Burundi, Côte d'Ivoire, Democratic Republic of the Congo, Guinea, Guinea-Bissau, Kenya, Mozambique, Nigeria, Sierra Leone, South Africa, Togo, Uganda, Zambia, and Zimbabwe.