PREDICTORS OF UNDER-REPORTING OF UNPROTECTED SEX WITH CLIENTS AS MEASURED BY SEMEN DETECTION AMONG FEMALE SEX WORKERS UNDER HIV TREATMENT AS PREVENTION OR PRE-EXPOSURE PROPHYLAXIS IN BENIN

Giguère K,^{1,2} Béhanzin L,^{1,3,4} Guédou FA,^{1,3,4} Goma-Matsétsé E,³ Leblond FA,⁵ Zannou DM,^{6,7} Alary M^{1,2,8}

¹Centre de recherche du CHU de Québec – Université Laval, Québec, Canada; ²Département de médecine sociale et préventive – Université Laval, Québec, Canada; ³Dispensaire IST, Cotonou, Bénin; ⁴École Nationale de Formation des Techniciens Supérieurs en Santé Publique et en Surveillance Épidémiologique – Université de Parakou, Parakou, Bénin; ⁵Consultant indépendant, Montréal, Canada; ⁶Faculté des sciences de la santé – Université d’Abomey-Calavi, Cotonou, Bénin; ⁷Centre national hospitalier universitaire HMK, Cotonou, Bénin; ⁸Institut national de santé publique du Québec, Québec, Canada

Background

- ✱ Treatment as prevention (TasP) and pre-exposure prophylaxis (PrEP) may result in condom migration and therefore require careful monitoring of unprotected sex.
- ✱ Self-report of unprotected sex is subject to biases.
- ✱ Under-reporting has been previously observed through vaginal detection or prostate-specific antigen (PSA), a biomarker of recent semen exposure (2 days), among female sex workers (FSW) reporting no unprotected sex.
- ✱ However, little is known about the factors leading to under-reporting of unprotected sex among FSW.
- ✱ The objective of this study was to assess predictors of under-reporting of unprotected sex among FSW at baseline of a TasP/PrEP demonstration study.

Methods

- ✱ Unprotected sex in the previous 2 days was assessed by face-to-face interview and vaginal detection of PSA at baseline of a TasP/PrEP prospective demonstration project (2014-2016).
- ✱ Under-reporting : not reporting any unprotected sex but testing positive for PSA.
- ✱ Socio-demographic, behavioural, and biological variables were tested for their association with under-reporting using bivariate Poisson regression models.
- ✱ Variables significantly associated ($p<0.05$) with under-reporting were included in a multivariate Poisson regression model.
- ✱ Among the 361 FSW participating in the study, we excluded those reporting a regular sexual partner in the last 2 days because self-reported condom use was uncommon with such partners. This resulted in a final sample size of 274 for the present analysis.

Results

Table 1 – Baseline characteristics (n=274)

Age, mean (sd) (years)	34 (9)
Beninese ^a	140 (51.1)
Christian ^b	204 (74.7)
Marital status	
Married	2 (0.7)
Divorced/separated	118 (43.2)
Widowed	57 (20.9)
Single	96 (35.2)
Had a regular partner in the last 12 months	153 (55.8)
Education	
None	89 (32.7)
Primary	100 (36.8)
Secondary	75 (27.5)
University	8 (2.9)
Alcohol use	174 (63.5)
Nb of clients in the last 2 days, mean (sd)	4.3 (4.6)
HIV positive	86 (31.4)
PSA positive	75 (27.4)
Under-reported unprotected sex	65 (23.7)

^a Other nationalities: Togolese, Ghanaian, Nigerian, Nigerien, Cameroonian

^b Other religions: Muslim, Traditional religion and no religion

TABLE 2 — BIVARIATE AND MULTIVARIATE ANALYSES OF THE DETERMINANTS ASSOCIATED TO UNDER-REPORTING OF UNPROTECTED SEX IN THE LAST 2 DAYS

Variable	n	Under-reporting (%)	Bivariate PR (95% CI)	Multivariate ^a PR (95% CI)
Religion				
Christian	41/204	20.1	0.58 (0.38-0.88)	0.58 (0.38-0.88)
Other ^b	24/69	34.8	Ref.	Ref.
Education				
None	28/89	31.5	Ref.	Ref.
Any	36/183	19.7	0.63 (0.41-0.96)	0.67 (0.44-1.02)
Alcohol use				
No	31/100	31.0	Ref.	Ref.
Yes	34/174	19.5	0.63 (0.41-0.96)	0.60 (0.40-0.91)
Had a regular partner in the last 12 months				
No	37/121	30.6	Ref.	Ref.
Yes	28/153	18.3	0.60 (0.39-0.92)	0.65 (0.42-0.99)

PR: proportion ratio

^a Multivariate analysis : including religion, education, alcohol use and having had a regular partner in the last 12 months

^b Including Muslim, Traditional religion and no religion

Conclusion

- ✱ Our results suggest that being Christian, alcohol use, and having had a regular partner in the last year were negatively associated with under-reporting of unprotected sex with clients among FSW from Benin.
- ✱ Awareness of the predictors of underreporting of unprotected sex might improve our capacity to better target FSW having unprotected sex with effective prevention approaches.

Disclosure of interest

Funding: Bill & Mellinda Gates Foundation (OPP1098973) and Canadian Institutes of Health Research (ROH-115205 and FDN-143218). The views expressed herein are those of the authors and do not necessarily reflect the official policy or position of the Bill & Melinda Gates Foundation.