

# Associations between the HIV status of the household head and the youths in the household and their risky sexual behavior: Findings from PHIA surveys in 10 African countries

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## BACKGROUND

- HIV prevalence remains high among youths (15-24 years old) in Sub-Saharan Africa; however, little is known regarding the association of parents and youth's HIV status, beyond the focus on mother-to-child transmission (MTCT).
- A large body of research documents a central role of parents and families in adolescents' sexual values, attitudes, and behavior.
- We examined the association between the HIV status of the household head (HH) and the youths in the household and their risky sexual behavior, using the Population-Based HIV Impact Assessment (PHIA) surveys conducted (2015-2019) by ministries of health in collaboration with ICAP at Columbia University and CDC.

## METHODS

- Study Population:** We included data from youth aged 15-24 from households in which the head of the household consented to provide an interview and a blood sample for HIV testing. Publicly available data from 12 PHIA surveys were analyzed for HIV prevalence among adolescents 15-24 by gender and head of household status.
- Analysis:** Data from 10 of the 12 surveys had sufficient observations in each demographic category to be included in the analysis of prevalence ratios. Jackknife series was used to estimate variance. We analyzed pooled HIV prevalence among youth (15-24) by head of household status

## RESULTS

We examined data from 52,498 youths aged 15-24 from 34,051 HHs. Among HHs, 4,234 (12.4%) were HIV+ (7.3% female HHs, 5.1% male HHs). HIV prevalence among adolescents (15-19) and young adults (20-24) with an HIV+ HHH was 4.7% and 13.0%, respectively. In contrast, HIV prevalence among those in the same age groups, but with the HIV- HH, was 0.9% and 2.0%, respectively.

Controlling for other covariates and country fixed effects, adolescents and young adults were more likely to be HIV+ if the HH was HIV+, with an adjusted

prevalence ratio (aPR) of 3.4 (95% CI: 2.8-4.1) and 3.6 (95% CI 3.2-4.2), respectively. Moreover, females aged 15-24 had significantly higher aPR (3.6 [95% CI: 3.1-4.0]) than males (2.9 [95% CI 2.3-3.7]). Adolescents and young adults were more likely to have more than one sex partner in the 12 months before the survey if their HH was HIV+, with aPR 1.1 (95% CI: 1.0-1.3) and 1.2 (95% CI: 1.1-1.3) respectively (Table 1).

Adolescents and young adults were **more likely** to be HIV positive if their household head was HIV positive.

Figure 1. HIV Prevalence among Youth (15-24 years) by gender and head of household's HIV status

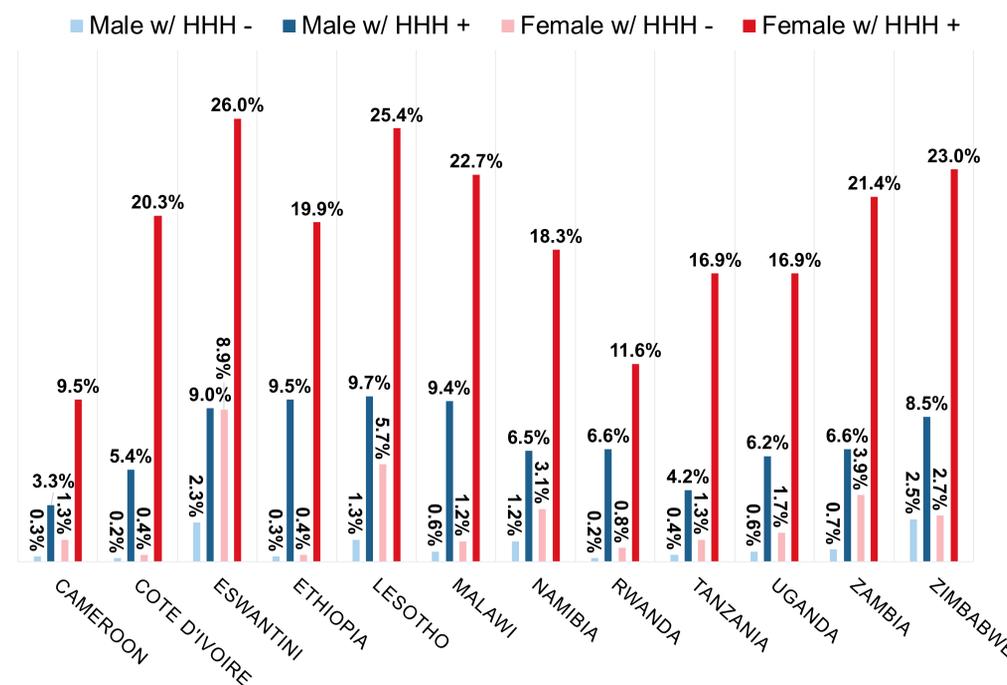


Table 1: Adjusted Prevalence Ratios of HIV Positivity and number of sexual partners by Selected Characteristics among Adolescents and Young Adults

Outcome variable	HIV+ status (15-19 years)		HIV+ status (20-24 years)		Two or more sexual partners (15-19 years)		Two or more sexual partners (20-24 years)	
	aPR	95% CI	aPR	95% CI	aPR	95% CI	aPR	95% CI
Head of House HIV+	3.4***	(2.8-4.1)	3.6***	(3.2-4.2)	1.1	(1.0-1.3)	1.2***	(1.1-1.3)
Head of House HIV- (Ref)	--	--	--	--	--	--	--	--
Male	0.5***	(0.4-0.6)	0.3***	(0.2-0.3)	2.5***	(2.3-2.7)	3.3***	(3.1-3.5)
Female (ref)	--	--	--	--	--	--	--	--
Urban	1.6***	(1.3-2.0)	1.4***	(1.2-1.6)	1.2***	(1.1-1.3)	1.1**	(1.0-1.20)
Rural (Ref)	--	--	--	--	--	--	--	--
Below Secondary level education	0.6***	(0.5-0.7)	0.7***	(0.6-0.8)	1.0	(0.9-1.1)	1.0	(1.0-1.1)
Education Secondary level and Above (ref)	--	--	--	--	--	--	--	--
Wealth index < 60th Percentile	1.1	(0.9-1.4)	1.0	(0.8-1.2)	1.1	(1.0-1.2)	1.3***	(1.2-1.4)
Wealth index ≥ 60th Percentile (ref)	--	--	--	--	--	--	--	--
Employed	1.0	(0.9-1.4)	1.2*	(1.0-1.3)	1.3***	(1.2-1.4)	1.3***	(1.2-1.3)
Unemployed (ref)	--	--	--	--	--	--	--	--

Note: \*: p-value<0.05 \*\*: p-value<0.01 \*\*\*: p-value<0.001  
The regression model also includes country fixed effect (dummy variables), not shown here.

## CONCLUSIONS

- The findings from 10 African countries with generalized HIV epidemic indicate a strong association between the head of household's HIV status and that of the youth living in that household and their risky behavior. The consistent pattern across these countries may inform the international agencies' policy towards the youths in HIV-affected households. The difference in prevalence among youth by sex supports higher risk is due to sexual

transmission rather than vertical transmission. Further research should identify context appropriate strategies for addressing family challenges around HIV prevention including family meetings, communal parenting, building efficacy around parent-adolescent communication around sexual topics, and the need to strengthen family bonding and positive parenting.



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