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Effect of Migration on Sexual and Reproductive Health Outcomes Among Young Women in Rural South Africa:

Preliminary Results From HPTN 068 Post Intervention Data

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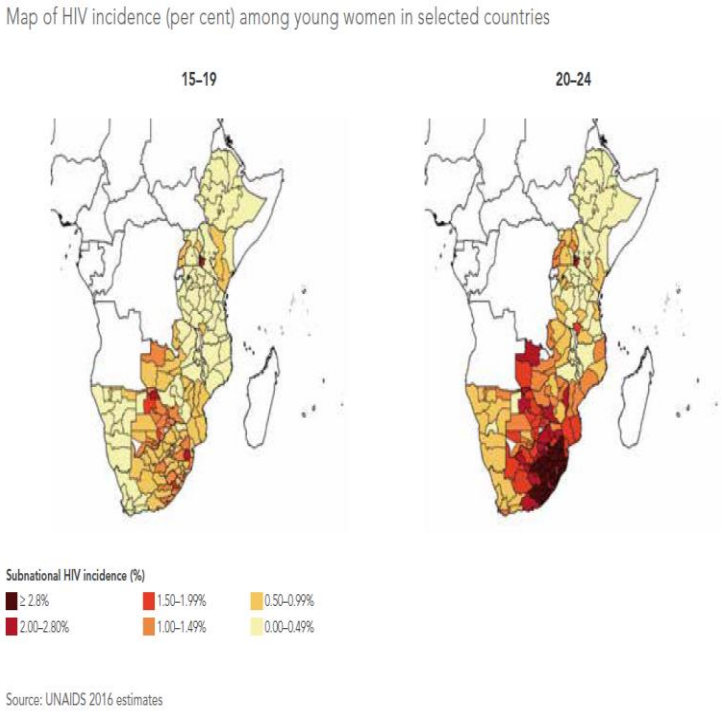
Background

- Young women experience high burden of Sexual Reproductive Health (SRH) -related morbidity incl. HIV.
  - HIV rates that are 3 times higher than their male counterparts.
- Migration is an established important structural factor of health outcomes.
- Very little attention has been given to the effect of migration on SRH outcomes among adolescent girls.



Palk and Blower J Acquir Immune Defic Syndr. 2015 , Anglewicz et al. AIDS. 2016, Dobra et al. AIDS. 2017

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Study Setting

- Agincourt: rural Mpumalanga province
  - Area: 420 km^2
- HDSS since 1992
  - 28 villages under surveillance
- High rates of poverty, unemployment and circular labour migration.
  - 60% M, 40% F are labour migrants
- This analysis used HPTN 068 post intervention survey data of 874 young women aged 18-25 years

Kathleen Kahn et al. Int. J. Epidemiol. 2012

Study variables

- **SHR Outcomes:**
  - Pregnancy* and Contraceptive use**: self-reported
  - HIV : Rapid HIV test
- **Migration:**
  - Migration: have you been away from your home community for more than one month at a time? (12 months)
  - Frequency: on how many separate occasions have you travelled away from your home community and slept away? (12 months)
- **Covariates:**
  - Age, BMI, currently at school, education level, early sex debut, partnership (life time and recent), condom use, orphan status and primary caregiver education level.

*Pregnancy = pregnant since last study visit
**Contraceptive use = current use

Statistical analysis

- **Main Aim:** To estimate the effect of migration on SRH outcomes among young women in the rural South Africa
  Aim 1: Prevalence/Incidence of SRH outcomes.
  - Established a sample for each outcome.
  - Estimated prevalence/incidence and 95% CIs.
- **Aim 2:** To examine the relationship between migration status and each of the SRH outcome,
  - Used logistic regression models.
  - In multivariable analyses, we examined potentially confounding and modification effects of the covariates.

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Results

Table 1: Characteristics of young women by migration status in Agincourt (N=874).

Characteristics	Category	Not migrated N (%)	Migrated N (%)	Total N (%)	p-value
Age	≤20	304 (69.1)	136 (30.9)	450 (51.5)	0.044
	>20	305 (75.3)	100 (24.7)	424 (48.5)	
Level of education	Grade ≤11	183 (82.8)	38 (17.2)	221 (25.3)	<0.001
	Grade 12	238 (68.0)	112 (32.00)	350 (40.0)	
	Tertiary	188 (68.6)	86 (31.4)	303 (34.7)	
Orphan status	Parents alive	369 (71.1)	150 (28.9)	519 (61.4)	0.547
	One Parent dead	204 (73.0)	76 (27.0)	280 (33.1)	
	Both parent dead	36 (78.3)	10 (21.7)	46 (5.4)	
Age of first sex	<15	18 (78.3)	5 (21.7)	23 (2.6)	
	≥15	591 (71.9)	231 (28.1)	851 (97.4)	
Sexual partners	1	334 (73.1)	123 (26.6)	457 (793)	0.041
	2	51 (63.0)	30 (37.0)	81 (14.1)	
	≥3	32 (84.2)	6 (15.8)	38 (6.6)	
Lifetime sexual partners	1	211 (74.8)	71 (25.2)	282 (33.4)	0.207

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Results

Table 2: Estimated incidence of SRH outcomes.

SRH outcomes	Prevalence, %	(95% CI)
Pregnancy	22.5	(19.9 - 25.4)
Contraceptive use	28.5	(25.6 - 31.6)
	Incidence, %	(95% CI)
HIV	3.8	(2.9 - 4.9)

Table 3: Logistic regressions examining the association of SRH outcomes with migration status.

SRH outcomes	OR (95% CI)	p-value	AOR (95% CI)	p-value
Pregnancy[a]	1.38 (0.78 – 2.42)	0.27	4.30 (1.11 – 16.49)	0.03*
Contraceptive use[b]	0.42 (0.24 – 0.86)	0.02*	0.46 (0.25 – 0.87)	0.01*
HIV[c]	1.12 (0.62 – 2.03)	0.70	4.91 (1.04 – 23.23)	0.04*

Each line corresponds to a separate multivariable model with the indicated outcome and migration as a predictor [reference group = not migrated].
[a]Analysis were adjusted for young woman's age, currently at school, education level, early sex debut, partners in life time, orphan status and primary caregiver education level.
[b]Analysis were adjusted for young woman's age, currently at school, early sex debut, partners in life time, orphan status and primary caregiver education level.
[d]Analysis were adjusted for partners in life time, recent partnership, contraceptive use, condom use, primary caregiver education level.
*p-value < 0.05.

Discussion

- Effect of migration observed:
  - Pregnancy and HIV
  - Contraceptive use
- Limitations: Low HIV cases resulted in a small sample size:
  - Loss of precision: wider CIs
- A better understanding of effect of migration on SRH needs further research.

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