Male migration and risky sexual behavior in rural India: is the place of origin critical for HIV prevention programs?

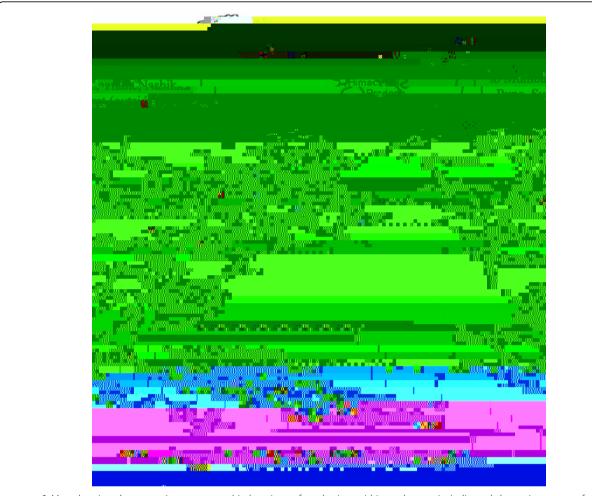
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Background: Recent studies of male migrants in India indicate that those who are infected with HIV are spreading the epidemic from high risk populations in high prevalence areas to populations in low prevalence areas. In this context, migrant men are believed to initiate and have risky sexual behaviors in places of destination and not in places of origin. The paucity of information on men's risky sexual behaviors in places of origin limits the decision to initiate HIV prevention interventions among populations in high out-migration areas in India.

Methods: A cross-sectional behavioral survey was conducted among non-migrants, returned migrants (with a history of migration), and active (current) migrants in rural areas across two districts with high levels of male out-migration: Prakasam district in Andhra Pradesh and Azamgarh district in Uttar Pradesh. Surveys assessed participant demographics, migration status, migration history, and sexual behavior along the migration routes, place of initiation of sex. District-stratified regression models were used to understand the associations between migration and risky sexual behaviors (number of partners, condom use at last sex) and descriptive analyses of migrants' place of sexual initiation and continuation along migration routes.

Results: The average age at migration of our study sample was 19 years. Adjusted regression analyses revealed that active migrants were more likely to engage in sex with sex workers in the past 12 months (Prakasam: 15 percent vs. 8 percent; adjusted odds ratio (aOR)=2.1, 95% Cl 1.2-3.4; Azamgarh: 19 percent vs.7 percent; aOR=4.0, 95% Cl 2.4-6.6) as well as have multiple (3+) sex partners (Prakasam: 18 percent vs. 9 percent; aOR=2.0, 95% Cl 1.3-3.2; Azamgarh: 28 percent vs. 21 percent; aOR=1.9, 95% Cl 1.2-3.0) than non-migrants. Contrary to popular belief, a high proportion of active and returned migrants (almost 75 percent of those who had sex) initiated sex at the place of origin before migrating, which is equivalent to the proportion of non-migrants who engaged in sex with sex workers as well as with casual unpaid partners. Moreover, non-migrants were more likely than migrants to engage in unprotected sex.

Conclusion:



1 Map showing the approximate geographic locations of study sites within each state in India and the major routes of male out-migration.

Participants

Sampling design

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Ethical considerations

Assessment

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Measures

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	Non-migrants	Returned migrants	Active migrants	Total
	%	%	%	
Prakasam district				
Total sample size	401	317	316	
A . (. , ± ,)	26.6 ± 6.1	28.8 ± 5.1	26.5 ± 5.5	27.3 ± 5.7
2. 1 . 1 . 1 . 1	66.8	86.4	70.6	74.0
	20.0	21.0	20.0	20.0
J 1				
ate to	10.5	8.2	10.8	9.9
· · · · · · · · · · · · · · · · · · ·	42.4	30.3	38.3	37.4
Engaged in agricultural work	38.7	24.9	22.5	29.5
Age at first migration (Mean±SD)	_	20.3 ± 3.9	18.8 ± 3.9	$19.6 \pm 4.0^{\#}$
Duration of stay in place of origin in the last visit*	-	-	5.7±4.6	-
Age at first sex (Mean±SD)	18.9±2.5	18.9±2.2	18.7±2.3	18.8±2.3
Total sample size	431	319	320	
Age (Mean±SD)	28.5 ± 6.7	35.2 ± 5.8	27.6 ± 6.1	30.2 ± 7.1
Currently married	67.8	96.9	71.3	77.5
Median age at marriage	19.5	20	20	20
Education				
1. 15 1.	7.2	3.1	5.3	5.4
in the state of th	39.2	34.2	51.9	41.5
Engaged in agricultural work	12.3	5.0	3.8	7.8
Age at first migration (Mean±SD)	_	19.1 ± 3.6	18.7 ± 3.2	18.9 ± 3.4 [#]
Duration of stay in place of origin in the last visit	_	-	4.8±5.1	-
Age at first sex (Mean±SD)	18.4±3.6	19.6±4.0	17.5±3.8	18.5±3.9

[#] Computed only for migrants.

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^{*} Computed for the last visit of migrants (active) to their native place.

Non-	Active migrants/Non- migrants			
	AOR ¹ (95% CI)			
	1.43 (1.06-1.96)**			
	0.60 (0.22 – 1.64)			
	4.00 (2.43 – 6.59)*			
	1.41 (0.98 – 2.02)			
\blacksquare	4.45 (2.47 - 8.02)*			
	1.92 (1.23 – 3.01)*			
	1.53 (0.55 - 4.23)			
	4.00 (1.62 - 9.93)*			
	3 05 (1 59-5 87)			

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