Predictors of HIV testing among youth in two districts in South Africa: Results from a community-based household survey

1. Introduction
2. Purpose of study
3. Methods
4. Data analysis
5. Results
6. Discussion
7. Conclusion

- South Africa remains at the center of the HIV epidemic.

- Largest population of HIV infected people in the world.

- Young people (age:15-24years) continue to be disproportionately affected by HIV
  - Prevalence rate: 7.9%
  - Incidence rate: 1% M=0.49% F=1.51%

- Third (1/3) of new infections in SA are in youths

- Young girls 3x more likely to be HIV infected than their male counterparts

- Various methods employed to improve HIV prevention and care across entire cascade
  - **Prevention:** Voluntary Medical Male Circumcision (VMMC), Microbicide gels, Pre-Exposure prophylaxis (PrEP),
  - **HIV testing programs:** Provider Initiated HIV Counselling and Testing (PICT), Community Based Counselling and Testing (CBCT), HIV Self testing
  - **Care and Treatment**: Universal Test and Treat (UTT)
- HIV testing remains an entry point for all HIV services
- Low HIV testing trends persist amongst youth
- Predictors for HIV testing noted as:
  - Gender, age, sexual behaviours, age at first sex, HIV knowledge and HIV risk perception

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This paper therefore seeks to understand-:

- Factors associated with HIV testing by gender, among young people aged 18 – 24 years old in OR Tambo district in the Eastern Cape and Nkangala District in Mpumalanga province.

- A cross-sectional study

- Target population: Young people aged 18 – 24 years.

- Thembisile Hani & King Sabata Dalindyebo sub-districts

- Multistage cluster sampling technique was used to enroll participants into the study.

- A self-administered structured questionnaire

- All data collection was done electronically

- STATA version 14

- Descriptive statistics: mean, standard deviation, median, inter-quartile range to summarize participant characteristics.

- Tests of significance (ttests, chi-squared) to investigate factors associated with HIV testing

- Multiple stepwise logistic regression models were built.

- Confounding variables were controlled for.

- All statistical investigations were two-tailed, P value=0.05, 95%CI.

Results

	Total		Males		Females		
	n	% /median)	n	%	n	%	p-value
Median age (years)	1949	20 (IQR 19-22)	962	20 (IQR19-22)	987	20 (IQR 19-22)	
Marital status:							
Single	1651	87.8	829	50.2	822	49.8	
Married/In a relationship	230	12.2	106	46.1	124	53.9	0.241
Occupation:							
Employed	149	7.9	94	63.1	55	36.9	
Unemployed	696	36.8	309	44.4	387	55.6	
Student	1034	54.6	534	51.6	500	48.4	<0.0001
Highest level of education:							
No Matric	912	48.0	466	51.1	446	48.9	
Matric and beyond	989	52.0	476	48.1	513	51.9	0.196
Member of a club	779	41.7	400	51.6	379	48.7	0.215
Receives a social grant	306	16.3	115	37.6	191	62.4	<0.0001
Income source:							
Employer/Business	154	8.4	91	59.1	63	40.9	
Family/partner	1403	76.5	715	51.0	688	49.0	
Social Grant	278	15.1	100	36.0	178	64.0	<0.0001
Living in a substandard house	98	5.2	51	52.0	47	48.0	0.605
Possession of 5+ basic commodities	1167	59.8	607	52.0	560	48.0	<0.0001

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Demographic variables

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Over half (52%) above matric level
Most males:
 < matric level (51.1%)

Most female
-Recipient of social grant (62.4%)
-Grant major source of income (64%)

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	Total Sample		Males		Females		
	n	%	n	%	n	%	p-value
HIV Risk Factors							
High HIV knowledge score	815	44.5	421	51.7	394	48.3	0.045
Alcohol use	944	50.5	542	57.4	402	42.6	<0.0001
Drug use	412	21.8	272	66.0	140	34.0	<0.0001
HIV Risk perception							
Ever tested for HIV	1136	60.4	494	43.5	642	56.5	<0.0001
High HIV risk perception	1450	78.6	729	50.3	721	49.7	0.266
Positive attitudes towards testing	1318	75.8	653	49.5	665	50.5	0.547
Sexual Behaviours							
Ever had sex	1388	73.8	705	50.8	683	49.2	0.154
Early sex debut before age 15y	194	15.0	137	70.6	57	29.4	<0.0001
Transactional sex ever	269	15.9	101	37.5	168	62.5	<0.0001
Partners 12 mo: 2+	720	51.2	460	63.9	260	36.1	<0.0001
No condom use during last sex	426	27.3	190	44.6	236	55.4	0.029

HIV knowledge & substance use

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44.5% scored correctly on HIV related questions including correctly rejecting myths Men scored higher (51.1%vs48.3%)

More than half the sample engaged in alcohol use (50.5%) more men abusing alcohol (57.4%) & drugs (66%)

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HIV testing & sexual behaviours

> **Less that 2/3 ever tested for HIV (60.4%)**

> **73.8% sexually active, especially men (50.8%vs49.2%)**
> **More males**:
> early sexual debut(70%vs30%)
> 2+partners in a year (M63.9%, 51.2% total sample)
> **More females:**
> transactional sex (62.5%) and no condom use at last sex (55.4%)

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Predictors for HIV testing, by gender

Factors	Males Unadjusted OR	Males Unadjusted 95% CI	Males Adjusted OR	Males Adjusted 95% CI	Females Unadjusted OR	Females Unadjusted 95% CI	Females Adjusted OR	Females Adjusted 95% CI
Age-21-24y. Ref=under 21	0.51	0.39-0.66	0.61	0.46-0.80	0.45	0.34-0.59	0.48	0.35-0.65
Formal housing	1.10	0.61-1.92	-	-	1.58	0.86-2.91	1.76	0.92-3.39
Completed matric	0.78	0.61-1.02	-	-	0.76	0.58-1.00	-	-
Basic commodities	1.12	0.85-1.46	-	-	1.17	0.89-1.55	1.40	1.02-1.92
High HIV knowledge	0.80	0.61-1.04	-	-	0.78	0.59-1.03	-	-
High HIV risk perception	1.28	0.92-1.79	-	-	1.04	0.71-1.40	-	-
Ever sex	0.26	0.19-0.37	0.32	0.22-0.45	0.34	0.25-0.46	0.40	0.28-0.54
Condom use at last sex	2.53	0.78-2.59	-	-	2.42	1.42-4.12	2.45	1.37-4.38
Multiple sexual partners	2.65	1.09-2.03	-	-	1.19	0.88-1.61	-	-
Transactional sex	1.00	0.65-1.53	-	-	1.21	0.84-1.74	-	-
Alcohol drinker	0.60	0.39-0.67	0.74	0.56-0.99	0.68	0.51-0.89	-	-
Uses drugs	0.95	0.72-1.27	-	-	1.05	0.72-1.54	-	-

Factors	Males				Females			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Age-21-24y. Ref=under 21	0.51	0.39 - 0.66	0.61	0.46 - 0.80	0.45	0.34 - 0.59	0.48	0.35 - 0.65
Formal housing	1.10	0.61 - 1.92	-	-	1.58	0.86 - 2.91	-	-
Completed matric	0.78	0.61 - 1.02	-	-	0.76	0.58 - 1.00	-	-
Basic commodities	1.12	0.85 - 1.46	-	-	1.17	0.89 - 1.55	1.40	1.02 - 1.92
High HIV knowledge	0.80	0.61 - 1.04	-	-	0.78	0.59 - 1.03	-	-
High HIV risk perception	1.28	0.92 - 1.79	-	-	1.04	0.71 - 1.40	-	-
Ever sex	0.26	0.19 - 0.37	0.32	0.22 - 0.45	0.34	0.25 - 0.46	0.40	0.28 - 0.54
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Alcohol use	0.60	0.39 - 0.67	0.74	0.56 - 0.99	0.68	0.51 - 0.89	-	-
Uses drugs	0.95	0.72 - 1.27	-	-	1.05	0.72 - 1.54	-	-

Predictors of HIV testing by gender

	Males				Females			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
F	OR	95% CI	OR	95% CI	OR		OR	95% CI
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Tran					1.21	0.84 - 1.74	-	-
Alco				0.56 - 0.99	0.68	0.51 - 0.89	-	-
Use				-	1.05	0.72 - 1.54		

Alcohol users: **OR=0.74**
Odds of HIV testing are **26% lower** in alcohol users

High SES: **OR=1.40**
Condom use at last sex: **OR=2.45**
Odds of HIV testing are -**40%** higher among people of high SES
-**145%** higher among those who used a condom at last sex

Age>21years
Males **(OR=0.61) 39% lower in males**
Females **(OR=0.48) 52% lower females**
Ever had sex
Males **(OR=0.32) 68% lower in males**
Females **(OR=0.40) 60% lower in females**

- Being sexually active and older (>21years) seen to be negatively associated with HIV testing

- Transitioning into adulthood – presents a time for exploring and navigating sexuality

- Use of alcohol and recreational drugs can lead to risky behaviors that increase the chances of getting HIV

- Fear of positive HIV test result a potential hindrance to HIV testing

- High HIV knowledge among males – not found as a predictor for HIV testing

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- Higher SES predictor for HIV testing

- Poverty indicated:
    - Unemployment, social grant, transactional sex

- Poverty can lead to a struggle for survival which promotes engagement into risky behaviors

- Fear of possibilities of HIV infection, perpetuate low HIV testing among the poor

- High odds of HIV testing amongst condom users at last sex
  - reality: low condom use amongst women

- Engagement in transactional sex may reduce safe sex negotiations among females

- Low condom use increases the risk of HIV infection,

- Low condom use consistent with low HIV testing

- Youth remain a diverse complex age-group which requires tailored approaches

- Conventional HIV testing methods likely to miss the youth at high risk of HIV infection
  - Innovative HIV testing platforms encouraged (self-testing)

- Integration of HIV testing with other services e.g. VMMC, Youth & adolescent health programs,

- Collaborative effort required to promote HIV testing in places and in ways appealing to youth

- Strong BCC activities which empower youth with adequate skills to minimize engagement in risky behaviors and promote HIV prevention and frequent testing.

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THANK YOU

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