

Prevalence of curable sexually transmitted infections in a population-representative sample of young adults in South Africa

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BACKGROUND

- Curable sexually transmitted infections (STIs) increase HIV transmission risk and cause substantial morbidity
- Due to limitations in access to diagnostic testing, the prevalence of curable STIs among young adults at risk for HIV is unknown
- Few population-representative studies have evaluated STIs in areas with high HIV burden in southern Africa

OBJECTIVE

- To estimate the prevalence and predictors of gonorrhoea, chlamydia, and trichomoniasis among young adults in rural South Africa

METHODS

- Between March 2020 - May 2021, young adults ages 15-29, randomly selected from a Health and Demographic Surveillance Site (HDSS) and stratified by gender and geographic area, were approached for enrollment in a 4-arm randomized controlled trial in rural KwaZulu-Natal, South Africa
- Participants in two trial arms were offered baseline STI testing; their data are reported in this analysis
- Male urine and female self-taken vaginal swab specimens were tested for gonorrhoea, chlamydia, and trichomoniasis by polymerase chain reaction using *Cepheid Xpert*
- Participants testing positive were contacted for treatment
- Linked demographic data were obtained from the annual HDSS household-level survey

We found a high prevalence of curable sexually transmitted infections in a representative sample of young adults in rural KwaZulu-Natal, South Africa, with higher prevalence among females and those residing in urban or peri-urban areas. Improved access to STI diagnostics to enable timely treatment is needed.

RESULTS

- Of 2323 young adults eligible for the parent study, 1743 (75%) enrolled
- Of 863 randomized to study arms offering STI testing, 814 (94%) accepted STI testing and provided specimens:
 - 52% female; median age 21.8 [IQR 18.8-25.6]
 - 36% completed secondary school; 56% unemployed
 - 43% married or in an informal union
 - 71% rural residence; 40% with history of migration
- Of 800 participants with complete test results, 179 (22.4%) tested positive for at least one STI

Figure 1. STI positivity by age and gender

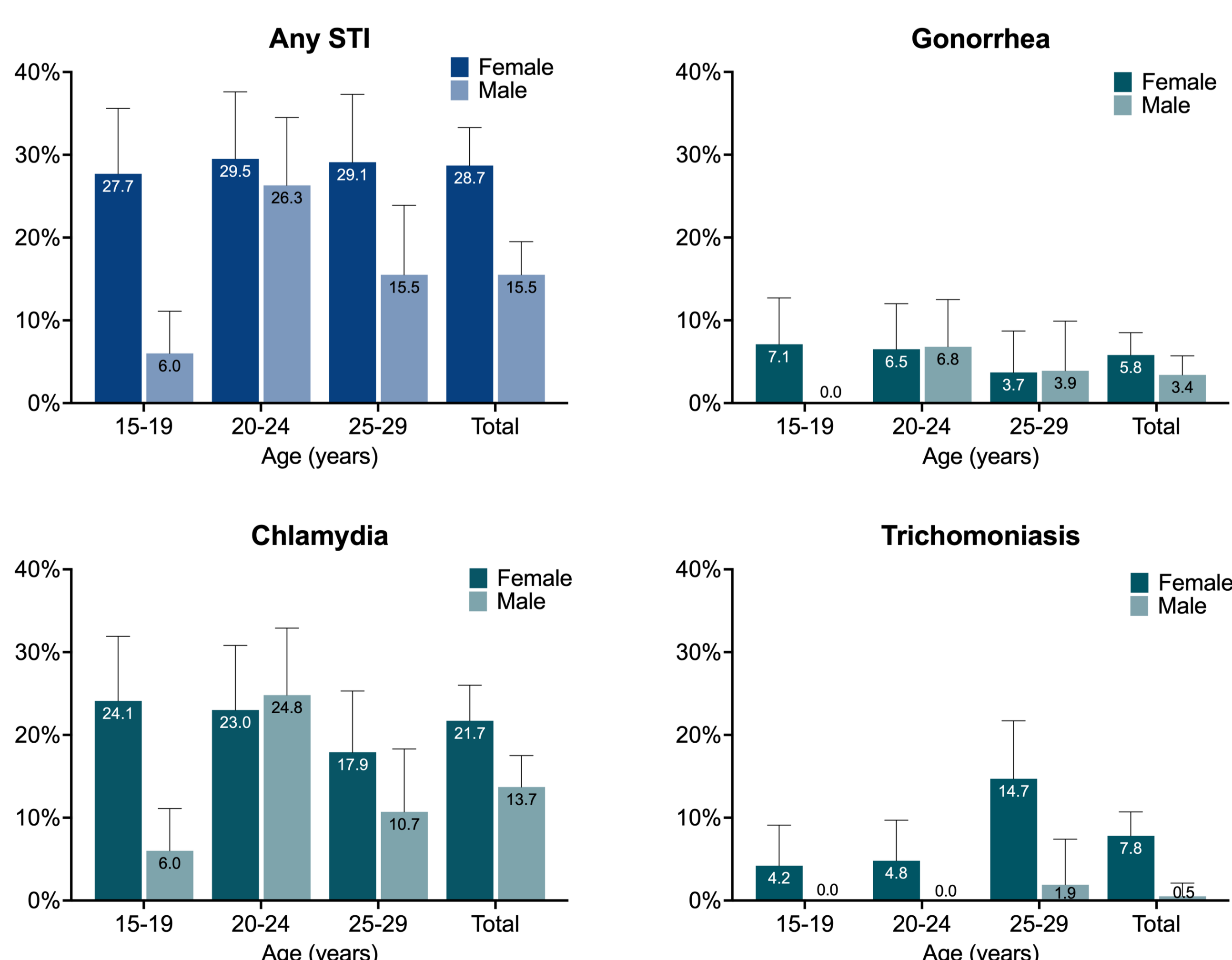


Table 1. Factors associated with STI diagnosis

| | OR, univariate analyses | aOR, multivariable analysis, n=798 |
|---------------------------|-------------------------|------------------------------------|
| Gender, n=800 | p<0.0001 | p<0.0001 |
| Male | 1 | 1 |
| Female | 2.19 (1.55-3.10) | 2.22 (1.54-3.20) |
| Age group, n=800 | p=0.004 | p=0.11 |
| 15-19 | 1 | 1 |
| 20-24 | 1.96 (1.31-2.95) | 2.01 (0.86-4.71) |
| 25-29 | 1.53 (0.99- 2.36) | 1.38 (0.56-3.42) |
| Highest education, n=704 | p=0.49 | |
| Some primary | 1 | |
| Some secondary | 0.74 (0.30-1.80) | |
| Matric or above | 0.90 (0.37-2.23) | |
| Employment, n=800 | p=0.024 | p=0.20 |
| Unemployed | 1 | 1 |
| Employed | 1.46 (0.83-2.60) | 1.72 (0.93-3.16) |
| Unknown | 0.68 (0.47-0.98) | 1.26 (0.55-2.87) |
| Marital status, n=800 | p=0.013 | p=0.93 |
| Not married | 1 | 1 |
| Married or informal union | 1.12 (0.75-1.66) | 1.03 (0.65-1.61) |
| Unknown | 0.61 (0.38-0.97) | 0.88 (0.42-1.81) |
| Migration history*, n=800 | p=0.058 | p=0.17 |
| Never | 1 | 1 |
| Internal Migration | 1.88 (1.11 -3.18) | 1.59 (0.91-2.77) |
| External Migration | 1.25 (0.86-1.81) | 0.91 (0.59-1.41) |
| Residence, n=798 | p=0.0022 | p=0.014 |
| Rural | 1 | 1 |
| Urban or Peri-urban | 1.74 (1.23-2.48) | 1.57 (1.10-2.30) |
| SE status tertile, n=764 | p=0.36 | |
| Low | 1 | |
| Medium | 0.75 (0.49-1.14) | |
| High | 0.80 (0.53-1.21) | |

Treatment

- 102/173 (59%) participants with an STI and complete follow-up data were able to be traced and treated within 4 weeks (at median 7 days [IQR 5-11 days] from specimen collection)