**Sexual behaviour in a rural high HIV prevalence South African community: time trends in the antiretroviral treatment era**

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**Supplementary Information**

**Figure S1:** Distribution of number of surveys for which eligible and the number in which participated



**Table S1:** Number of surveys in which participated by number for which eligible

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Women -- all respondents** |  |  |  |  |  |  |  |  |  |
|  |  | **Sexual behaviour surveys participated** |  |  |
|  |  | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Total** | **Survey completion %** |
| **Surveys eligible** | **1** | 5198 | 1222 |  |  |  |  |  |  | 6420 | 19% |
| **2** | 2698 | 1736 | 414 |  |  |  |  |  | 4848 | 26% |
| **3** | 1349 | 1406 | 809 | 167 |  |  |  |  | 3731 | 31% |
| **4** | 850 | 1119 | 1026 | 410 | 102 |  |  |  | 3507 | 34% |
| **5** | 562 | 814 | 857 | 585 | 277 | 54 |  |  | 3149 | 36% |
| **6** | 286 | 548 | 743 | 596 | 410 | 163 | 29 |  | 2775 | 39% |
| **7** | 437 | 676 | 913 | 1003 | 918 | 603 | 277 | 61 | 4888 | 42% |
|  | **Total** | 11380 | 7521 | 4762 | 2761 | 1707 | 820 | 306 | 61 |  | 36% |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Men -- all respondents** |  |  |  |  |  |  |  |  |  |
|  |  | **Sexual behaviour surveys participated** |  |  |
|  |  | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Total** | **Survey completion %** |
| **Surveys eligible** | **1** | 5465 | 903 |  |  |  |  |  |  | 6368 | 14% |
| **2** | 2912 | 1395 | 248 |  |  |  |  |  | 4555 | 21% |
| **3** | 1657 | 1228 | 461 | 80 |  |  |  |  | 3426 | 23% |
| **4** | 1107 | 1182 | 749 | 244 | 48 |  |  |  | 3330 | 27% |
| **5** | 737 | 787 | 651 | 311 | 79 | 8 |  |  | 2573 | 26% |
| **6** | 436 | 549 | 527 | 351 | 175 | 50 | 8 |  | 2096 | 29% |
| **7** | 711 | 745 | 738 | 606 | 363 | 175 | 57 | 11 | 3406 | 28% |
|  |  | 13025 | 6789 | 3374 | 1592 | 665 | 233 | 65 | 11 |  | 26% |

**Table S2:** Association between sexual behaviour survey completion and demographic characteristics, all survey rounds

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Women** |  |  |  |  |  | **Men** |  |  |  |  |
|  | **Eligible** | **Partic.** | **Perc.** | **OR** | **Adj OR\*** |  | **Eligible** | **Partic.** | **Perc.** | **OR** | **Adj OR\*** |
| **Total** | 107948 | 38519 | 35.7% |  |  |  | 88359 | 22605 | 25.6% | 0.62 (0.61, 0.63) | 0.72 (0.71, 0.73) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Rural** | 58305 | 23619 | 40.5% | 1 | 1 |  | 44778 | 12386 | 27.7% | 1 | 1 |
| **Peri-urban** | 30980 | 10664 | 34.4% | 0.77 (0.75, 0.79) | 0.80 (0.78, 0.83) |  | 26606 | 7034 | 26.4% | 0.94 (0.91, 0.97) | 1.04 (1.01, 1.08) |
| **Urban** | 9040 | 1645 | 18.2% | 0.33 (0.31, 0.35) | 0.40 (0.38, 0.43) |  | 6882 | 894 | 13.0% | 0.39 (0.36, 0.42) | 0.54 (0.50, 0.58) |
| **Non-res** | 9623 | 2591 | 26.9% | 0.54 (0.52, 0.57) | 0.58 (0.56, 0.61) |  | 10093 | 2291 | 22.7% | 0.77 (0.73, 0.81) | 0.95 (0.90, 1.00) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Age 17-19** | 18322 | 8281 | 45.2% | 1.67 (1.60, 1.75) | 1.47 (1.41, 1.54) |  | 18392 | 7347 | 39.9% | 2.40 (2.28, 2.52) | 2.19 (2.08, 2.31) |
| **Age 20-24** | 24457 | 9223 | 37.7% | 1.23 (1.18, 1.28) | 1.17 (1.12, 1.22) |  | 21751 | 6122 | 28.1% | 1.41 (1.34, 1.49) | 1.36 (1.29, 1.43) |
| **Age 25-29** | 17263 | 5696 | 33.0% | 1 | 1 |  | 13231 | 2872 | 21.7% | 1 | 1 |
| **Age 30-34** | 13711 | 4456 | 32.5% | 0.98 (0.93, 1.03) | 0.96 (0.91, 1.01) |  | 9704 | 1960 | 20.2% | 0.91 (0.86, 0.97) | 0.91 (0.86, 0.98) |
| **Age 35-39** | 12092 | 3937 | 32.6% | 0.98 (0.93, 1.03) | 0.93 (0.88, 0.98) |  | 7891 | 1447 | 18.3% | 0.81 (0.75, 0.87) | 0.80 (0.75, 0.86) |
| **Age 40-44** | 11207 | 3571 | 31.9% | 0.95 (0.90, 1.00) | 0.83 (0.79, 0.88) |  | 6639 | 1099 | 16.6% | 0.72 (0.66, 0.77) | 0.69 (0.63, 0.74) |
| **Age 45-49** | 10896 | 3355 | 30.8% | 0.90 (0.86, 0.95) | 0.77 (0.72, 0.81) |  | 5840 | 970 | 16.6% | 0.72 (0.66, 0.78) | 0.69 (0.63, 0.75) |
| **Age 50-54** |  |  |  |  |  |  | 4911 | 788 | 16.0% | 0.69 (0.63, 0.75) | 0.65 (0.60, 0.72) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **No education** | 6948 | 2441 | 35.1% | 0.81 (0.77, 0.85) | 0.95 (0.90, 1.01) |  | 5692 | 1101 | 19.3% | 0.53 (0.49, 0.57) | 0.87 (0.80, 0.94) |
| **Some primary** | 12017 | 4579 | 38.1% | 0.92 (0.88, 0.96) | 1.06 (1.01, 1.11) |  | 9970 | 2495 | 25.0% | 0.74 (0.70, 0.78) | 0.92 (0.87, 0.97) |
| **Primary** | 12668 | 5245 | 41.4% | 1.06 (1.01, 1.10) | 1.09 (1.04, 1.14) |  | 11376 | 3273 | 28.8% | 0.89 (0.85, 0.94) | 0.93 (0.89, 0.98) |
| **Compulsory** | 36722 | 14714 | 40.1% | 1 | 1 |  | 30466 | 9496 | 31.2% | 1 | 1 |
| **Matric** | 28039 | 8738 | 31.2% | 0.68 (0.66, 0.70) | 0.78 (0.75, 0.81) |  | 21026 | 4542 | 21.6% | 0.61 (0.58, 0.63) | 0.75 (0.72, 0.78) |
| **Higher** | 11554 | 2802 | 24.3% | 0.48 (0.46, 0.50) | 0.69 (0.66, 0.73) |  | 9829 | 1698 | 17.3% | 0.46 (0.44, 0.49) | 0.75 (0.71, 0.80) |

\*Odds-ratio linearly adjusted for residence location, age group, education level, and survey round

**Figure S2:** Survey participation by age group over time. Solid lines show the proportion of eligible participants who participate in any portion of the surveillance (HIV, general health, or sexual behaviour), and dashed lines indicate the proportion of all eligible respondents who have complete data in the sexual behaviour survey. For men, participation was about 10% to 15% higher amongst 17–24 year-olds than 25–34 or 35–54 year-olds. There was no difference in survey participation amongst the older two age groups, but 35–54 year-olds were less likely to have complete sexual behaviour data than were men 25–34 years. The differential in participation between age groups was smaller for women than for men, al- though the gradient in the proportion with complete sexual behaviour data was similar.

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**Table S3:** Predictors of sexual behaviour survey participation, adjusting for demographic characteristics and previous sexual behaviour reports

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **Adj OR\*** | **95% CI** |
| **First time eligible for participation in current round** | 196307 | 0.94 | (0.91, 0.97) |
| **Was eligible for participation in previous round** | 196307 | 1.06 | (1.03, 1.09) |
| **Completed sexual behaviour survey in previous round, conditional on being eligible** | 131273 | 1.93 | (1.88, 1.98) |
| **Participated in HIV testing in previous round, conditional on being eligible** | 131273 | 1.99 | (1.93, 2.04) |
| **Tested positive for HIV in previous round, conditional on participating in previous HIV testing round** | 36332 | 0.86 | (0.82, 0.91) |
| **Multiple sexual partnerships at previous round, conditional on participating in previous sexual behaviour survey round** | 48698 | 0.94 | (0.86, 1.03) |
| **Concurrent sexual partnerships at previous round, conditional on participating in previous sexual behaviour survey round** | 44735 | 0.95 | (0.83, 1.08) |
| **Had casual partner at previous round, conditional on participating in previous sexual behaviour survey round** | 48561 | 0.97 | (0.89, 1.05) |
| **Condom at last sex with regular partner at previous round, conditional on participating in previous round and having a regular partner** | 33500 | 0.97 | (0.92, 1.02) |

\*Adjusted odds ratio, adjusting for sex \* age group, resident location, education level, and survey round