

Supplementary Material

Sexual activities and condom use among heterosexual men and women engaged in mixed-gender group sex events in Melbourne, Australia

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Supplementary Materials

Table S1. Demographic characteristics between those who had group sex compared to those who did not, stratified by men and women.

| Demographic characteristics | Had group sex (N=141 men, 36 women) | No group sex (N=1627 men, 1473 women) | P value |
|------------------------------------|--|--|----------------------------|
| Age, mean (SD) | | | |
| Men | 34.3 (10.0) | 31.6 (10.1) | 0.002 |
| Women (n=36) | 29.3 (8.1) | 27.5 (6.3) | 0.096 |
| Country of birth, n (%) | | | Men: 0.325 Women: 0.441 |
| Australia | Men: 57 Women: 9 | Men: 618 Women: 411 | |
| Overseas | Men: 66 Women: 24 | Men: 793 Women: 949 | |
| Unknown | Men: 18 Women: 3 | Men: 216 Women: 113 | |

Table S2. Factors associated with chlamydia positivity among 2891 participants who were tested for chlamydia.

| | n/N (%) | Odd ratio (95% CI) | P value | Adjusted odds ratio (95% CI) | P value |
|---------------------------------------|-----------------|-------------------------------|----------------|---|----------------|
| Age (year), n (%) | | | | | |
| 16-25 | 85/1044 (8.1%) | 1 (reference) | | 1 (reference) | |
| 26-35 | 68/1373 (5.0%) | 0.6 (0.4-0.8) | 0.001 | 0.5 (0.4-0.8) | <0.001 |
| ≥36 | 23/474 (4.9%) | 0.5 (0.3-0.8) | 0.008 | 0.5 (0.3-0.9) | 0.014 |
| Sex, n (%) | | | | | |
| Male | 84/1478 (5.7%) | 1 (reference) | | 1 (reference) | |
| Female | 92/1413 (6.5%) | 1.2 (0.9-1.6) | 0.323 | 1.1 (0.8-1.5) | 0.707 |
| Country of birth, n (%) | | | | | |
| Australia | 45/966 (4.7%) | 1 (reference) | | 1 (reference) | |
| Overseas | 121/1687 (7.2%) | 1.5 (1.1-2.1) | 0.019 | 1.5 (1.1-2.2) | 0.018 |
| Unknown | 10/238 (4.2%) | 0.8 ((0.4-1.7) | 0.627 | 0.8 (0.4-1.7) | 0.629 |
| Group sex participation, n (%) | | | | | |
| No | 162/2735 (5.9%) | 1 (reference) | | 1 (reference) | |
| Yes | 15/156 (9.6%) | 1.6 (0.9-2.8) | 0.091 | 1.8 (1.0-3.2) | 0.040 |

Note. *n* represents the number of individuals tested positive for chlamydia and *N* represents the number of individuals who were tested for chlamydia.

Table S3. Factors associated with gonorrhoea positivity among 2913 participants who were tested for gonorrhoea.

| | n/N (%) | Odd ratio (95% CI) | P value | Adjusted odds ratio (95% CI) | P value |
|---------------------------------------|----------------|-------------------------------|----------------|---|----------------|
| Age (year), n (%) | | | | | |
| 16-25 | 5/ 1053 (0.5%) | 1 (reference) | | 1 (reference) | |
| 26-35 | 10/1386 (0.7%) | 1.5 (0.5-4.5) | 0.436 | 1.5 (0.5-4.4) | 0.464 |
| ≥36 | 5/474 (1.5%) | 2.2 (0.6-7.8) | 0.202 | 2.1 (0.6-7.8) | 0.248 |
| Sex, n (%) | | | | | |
| Male | 11/1476 (0.7%) | 1 (reference) | | 1 (reference) | |
| Female | 9/1437 (0.6%) | 0.8 (0.3-2.0) | 0.692 | 1.0 (0.4-2.4) | 0.945 |
| Country of birth, n (%) | | | | | |
| Australia | 7/972 (0.7%) | 1 (reference) | | 1 (reference) | |
| Overseas | 12/1706 (0.7%) | 1.0 (0.4-2.5) | 0.962 | 1.0 (0.4-2.7) | 0.934 |
| Unknown | 1/235 (0.4%) | 0.6 (0.1-4.8) | 0.624 | 0.3 (0.1-5.1) | 0.662 |
| Group sex participation, n (%) | | | | | |
| No | 18/2753 (0.7%) | 1 (reference) | | 1 (reference) | |
| Yes | 2/160 (1.3%) | 1.9 (0.4-8.4) | 0.376 | 1.7 (0.4-7.7) | 0.475 |

Note. *n* represents the number of individuals tested positive for gonorrhoea and *N* represents the number of individuals who were tested for gonorrhoea.

Table S4. Factors associated with syphilis positivity among 1968 participants who were tested for syphilis.

| | n/N (%) | Odds ratio (95% CI) | P value | Adjusted odds ratio (95% CI) | P value |
|--------------------------------|----------------|--------------------------------|----------------|---|----------------|
| Age (year), n (%) | | | | | |
| 16-25 | 3/677 (0.4%) | 1 (reference) | | 1 (reference) | |
| 26-35 | 6/949 (0.6%) | 15 (0.4-5.8) | 0.599 | 1.5 (0.4-6.1) | 0.562 |
| ≥36 | 8/342 (2.3%) | 5.5 (1.4-20.7) | 0.013 | 4.6 (1.2-18.2) | 0.032 |
| Sex, n (%) | | | | | |
| Male | 12/1047 (1.1%) | 1 (reference) | | 1 (reference) | |
| Female | 5/921 (0.5%) | 0.5 (0.2-1.3) | 0.160 | 0.7 (0.2-2.0) | 0.461 |
| Country of birth, n (%) | | | | | |
| Australia | 7/640 (1.1%) | 1 (reference) | | 1 (reference) | |
| Overseas | 9/1193 (0.8%) | 0.4 (0.2-1.1) | 0.081 | 0.6 (0.2-1.5) | 0.255 |
| Unknown | 1/135 (0.7%) | 0.5 (0.1-4.2) | 0.540 | 0.6 (0.1-4.6) | 0.604 |
| Group sex participation, n (%) | | | | | |
| No | 17/1859 (0.9%) | - | | - | |
| Yes | 0/109 | - | | - | |

Note. *n* represents the number of individuals tested positive for syphilis and *N* represents the number of individuals who were tested for syphilis.

Table S5. Engagement in different sexual activities in the most recent group sex event among 177 participants who had had group sex in the past 3 months, stratified by men and women.

| | Total number of people involved (N=141 men, 36 women) | Number of partners engaged in the activity, range | Number of partners engaged in the activity, median (IQR) |
|---|---|---|--|
| Any group sex event | Men: 141 (100%) Women: 36 (100%) | Men: 0-10 Women: 0-30 | Men: 1 (1-3) Women: 1 (1-1) |
| Kissing anyone | Men: 135 (95.8%) Women: 36 (100%) | Men: 0-39 Women: 1-27 | Men: 4 (4-6) Women: 2 (2-2) |
| <i>Kissing opposite sex</i> | Men: 135 (95.8%) Women: 9 (25.0%) | Men: 0-20 Women: 0-8 | Men: 2 (2-3) Women: 0 (0-1) |
| <i>Kissing same sex</i> | Men: 128 (90.8%) Women: 34 (94.4%) | Men: 0-19 Women: 0-4 | Men: 2 (2-2) Women: 2 (1-2) |
| Engaging in Fellatio | | | |
| Received from women (men only) | 129 (90.8%) | 0-16 | 2 (1-2) |
| Performed by women (women only) | 32 (88.9%) | 0-8 | 2 (1-2) |
| Engaging in cunnilingus | | | |
| <i>Performed by men (men only)</i> | 114 (80.8%) | 0-9 | 2 (1-2) |
| <i>Received from men (women only)</i> | 29 (80.6%) | 0-8 | 2 (1-2) |
| <i>Received from women (women only)</i> | 29 (80.6%) | 0-15 | 1 (0.5-2) |
| Vaginal sex | Men: 133 (94.3%) Women: 32 (88.9%) | Men: 0-10 Women: 0-8 | Men: 2 (1-2) Women: 2 (1-2) |
| Anal sex | Men: 4 (2.8%) Women: 2 (5.6%) | Men: 0-2 Women: 0-1 | Men: 1 (1-1) Women: 1 (1-1) |