

Comparing men who have sex with women, men who have sex with men only and men who have sex with men and women visiting a public STD clinic

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BACKGROUND

- Sexually transmitted infection (STI) rates continue to rise in the United States.
- Men reporting same sex behavior are disproportionately affected by STIs.
- Limited research distinguishes between men who have sex with men only (MSMO) and men who have sex with men and women (MSMW) and assesses how they compare with men who have sex with women only (MSW).

STUDY OBJECTIVE

- To define and compare the demographic, behavioral and clinical characteristics of MSMO, MSMW and MSW and to identify factors associated with the diagnosis of acute STI (aSTI) in patients attending two STI clinics in Baltimore, MD.

METHODS

Study Design & Sampling: Retrospective cohort analysis for men first visiting two Baltimore City public STD Clinics, 2011-2016. MSMO and MSMW were compared to an age category-matched random sample of MSW; defined by self-reported lifetime sexual partner gender.

Data Source: Clinical database with information documented by clinicians during the clinical encounter.

Primary Outcome: Diagnosis of an aSTI, defined as *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG), nongonococcal urethritis (NGU) or primary or secondary syphilis (PSS) at any anatomic site (urogenital, pharyngeal, rectal).

Data Analysis: Comparative descriptive analyses using Chi-square tests. STI diagnosis variables were assessed as test positivity (% of those tested) and sample positivity (% of the entire sample diagnosed with an aSTI). Logistic regression assessed variables associated with a composite aSTI diagnosis.

RESULTS

Table 1: Demographic and Clinical Characteristics

	Total n=3434	MSW n=1717	MSMO n=1226	MSMW n=491
Mean age	29.8	29.9	29.8	29.4
Race/Ethnicity*±				
White	517 (15.1%)	152 (8.9%)	282 (23.0%)	83 (16.9%)
Black	2621 (76.3%)	1426 (83.1%)	834 (68.0%)	361 (73.5%)
Hispanic	178 (5.2%)	99 (5.8%)	54 (4.4%)	25 (5.1%)
Other/Unknown	118 (3.4%)	40 (2.3%)	56 (4.6%)	22 (4.5%)
Partners in last 6 months*±§				
0	240 (7.0%)	106 (6.2%)	97 (7.9%)	37 (7.5%)
1	975 (28.4%)	577(33.6%)	305 (24.9%)	93(18.9%)
2	875 (25.5%)	463(27.0%)	272 (22.2%)	140 (28.5%)
3+	1344 (39.1%)	571(33.3%)	552 (45.0%)	221 (45.0%)
Condom Use*±				
Not Always	2805 (81.7%)	1445 (84.2%)	982 (80.1%)	378 (77.0%)
Always	555 (16.2%)	242 (14.1%)	213 (17.4%)	100 (20.4%)
Missing	74 (2.2%)	30 (1.8%)	31 (2.5%)	13 (2.7%)
History of HIV diagnosis*±§	481 (14.0%)	30 (1.8%)	369 (30.1%)	82 (16.7%)
History of aSTI diagnosis*±§	1476 (43.0%)	581 (33.8%)	670 (54.7%)	225 (45.8%)
Alcohol >4 drinks/day in last 30 days	787 (22.9%)	382 (22.3%)	285 (23.3%)	120 (24.4%)
Symptoms at visit*§	1031 (30.0%)	554 (32.3%)	315 (25.7%)	162 (33.0%)

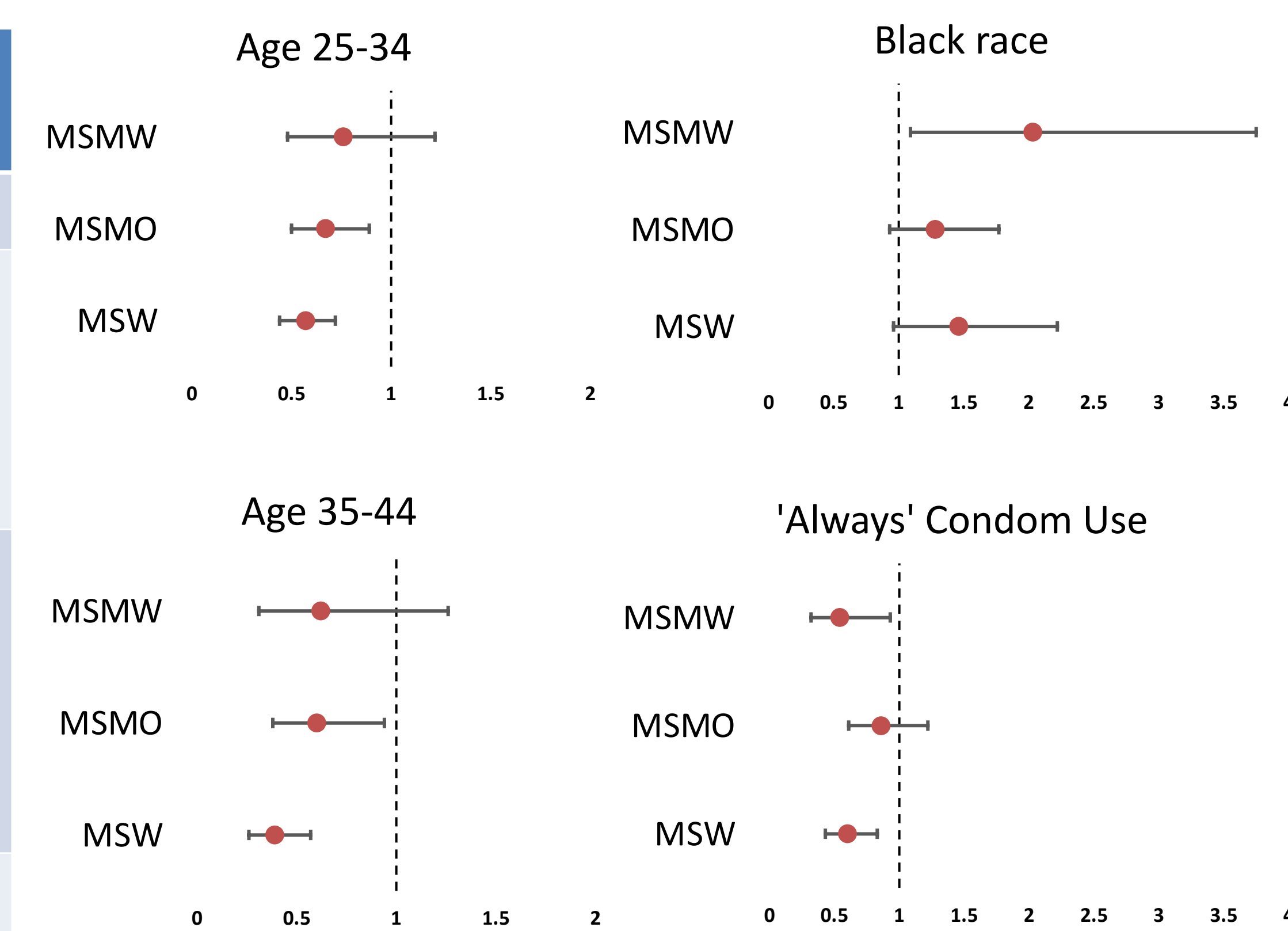
*Significant difference MSW vs. MSMO; ±Significant difference MSW vs. MSMW; §Significant difference MSMO vs. MSMW

Table 2: aSTI Test Positivity

	Total n=3434	MSW n=1717	MSMO n=1226	MSMW n=491
Any aSTI	1199 (34.9%)	594 (34.6%)	426 (34.8%)	179 (36.5%)
C. trachomatis				
Urogenital*±§	184/1406 (13.1%)	146/672 (21.7%)	20/518 (3.9%)	18/216 (8.3%)
Pharyngeal	41/1612 (2.5%)	12/649 (1.9%)	22/702 (3.1%)	7/261 (2.7%)
Rectal	151/787 (19.2%)	#	117/599 (19.5%)	31/178 (17.4%)
N. gonorrhoeae				
Urogenital±	235/2790 (8.4%)	114/1490 (7.7%)	75/903 (8.3%)	46/397 (11.6%)
Pharyngeal*±	152/1782 (8.5%)	25/731 (3.4%)	89/763 (11.7%)	38/288 (13.2%)
Rectal	152/786 (19.3%)	##	112/598 (18.7%)	39/178 (21.9%)
Syphilis (PSS)*±	103/3058 (3.4%)	9/1537 (0.6%)	70/1083 (6.5%)	24/438 (5.5%)
Nongonococcal urethritis*±	513/1611 (31.8%)	338/916 (36.9%)	118/468 (25.2%)	57/227 (25.2%)

*Significant difference MSW vs. MSMO; ±Significant difference MSW vs. MSMW; §Significant difference MSMO vs. MSMW
#10 tested, 3 were positive
10 were tested, one was positive

Figure 1: aOR of Diagnosis of aSTI



- Older age was associated with lower odds of aSTI diagnosis in MSW and MSMO but not in MSMW
- Black race was associated with higher aOR of aSTI among MSMW (aOR: 2.03, 95% CI 1.09-3.75)
- 'Always' condom use was protective in MSW (aOR: 0.60, 95% CI 0.43-0.83) and MSMW (aOR: 0.54, 95% CI 0.32-0.93) but not in MSMO

LIMITATIONS

- Limited resource allocation at the publicly funded clinics may have dictated testing practices.
- Classification of sexual behavior was by lifetime history, not current behaviors.
- Sex and gender data were not consistently de-aggregated, unclear how many trans men were in cohort.

CONCLUSIONS

- Men of all three sexual behaviors were equally likely to be diagnosed with an aSTI.
- Differences in individual STI diagnoses, behavioral and clinical characteristics associated with aSTI suggest that MSMO, MSMW and MSW have diverse sexual health needs; future research and interventions should treat MSMO and MSMW as distinct populations and further explore similarities and differences.