

# Association of Gender of Sexual Partners with Women's Sexually Transmitted Infection Risk

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## BACKGROUND

- Previous research suggests that women who have sex with women and men (WSWM) have the highest risk of STI acquisition compared to other female sexual behavior groups.
- We hypothesized a continuum of STI risk, with women who have sex with women (WSW) having the lowest risk, followed by women who have sex with men (WSM) with a single partner, WSM with multiple partners, and WSWM.

## OBJECTIVES

- To compare risk factors and STI prevalence among African American females: WSW, WSM with a single male partner, WSM with multiple male partners, WSWM, and the general female STI Clinic population.

## METHODS

- Secondary analysis of data from two studies enrolling African American women evaluated at an urban STI Clinic in Birmingham, AL, USA.
- A Case-Control Study of Women with Multiple Sexual Partners (PI: Muzny) evaluated WSM with one male partner (n=91) and WSM with ≥ 4 male partners (n=78) during the past year.
- The Women's Sexual Health Project (PI: Muzny) included WSW (n=78) and WSWM (n=85), categorized based on the gender of sexual partners during the past year.
- Participants in both studies completed an interviewer-administered questionnaire that included socio-demographic and sexual history information. All participants were screened for the following: BV by Amsel Criteria, CT and GC by NAAT, TV by Wet Prep, HSV I & II, Syphilis and HIV by serology.
- STI prevalence for females attending the STI Clinic were obtained from monthly statistics reported for the clinic.

**Table 1. Demographic and Social Characteristics of Both Samples**

	WSW past year (n = 78) n (%)	WSWM past year (n = 85) n (%)	WSM 1 male partner past year (n = 91) n (%)	WSM 4+ male partners past year (n = 78) n (%)	Overall significance
Age ≤25	44 (56.4)	38 (44.7)	39 (42.9)	49 (62.8)	.029
HS degree or GED	66 (84.6)	65 (76.5)	79 (86.8)	56 (74.4)	.114
Currently working part- or full-time	29 (37.2)	39 (45.9)	47 (51.6)	40 (51.3)	.220
Smoked cigarettes, past 30 days	46 (59.7) a	55 (64.7) a	33 (36.3) b	53 (67.9) a	<.001
Drank alcohol, past 30 days	55 (70.5)	57 (67.1)	54 (59.3)	55 (70.5)	.357
Used drugs, past 30 days	25 (32.1)	35 (41.2)	26 (28.6)	31 (39.7)	.248

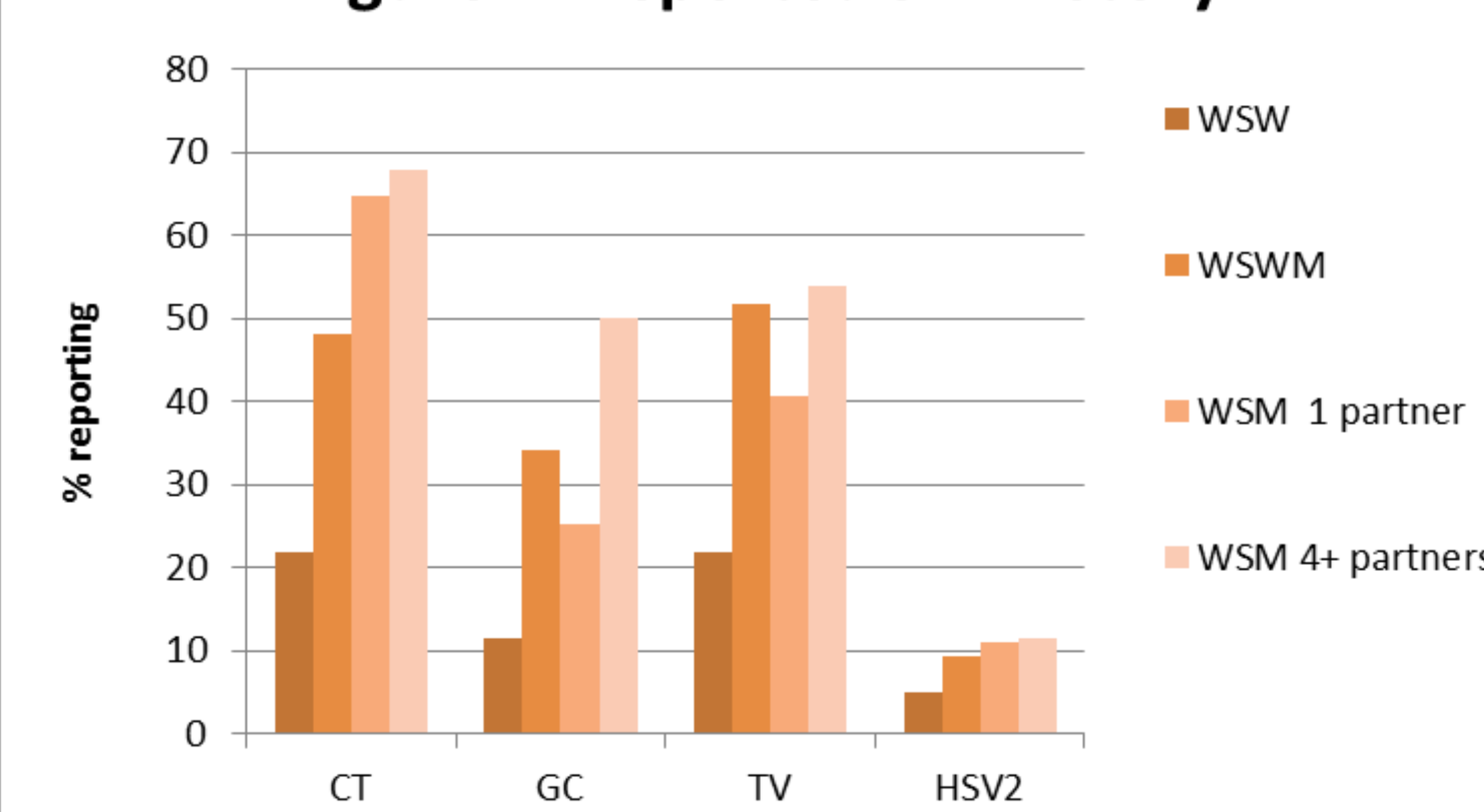
Notes: Letters denote the categories in which the proportions do not differ significantly.

**Table 2. STI Acquisition Risk Factors in Both Samples**

	WSW past year (n = 78) n (%)	WSWM past year (n = 85) n (%)	WSM 1 male partner past year (n = 91) n (%)	WSM 4+ male partners past year (n = 78) n (%)	Overall significance
Social support scale score	4.05 (0.98) a	3.81 (1.01) a	3.90 (1.00) a	3.41 (1.06) b	.001
Depression scale score	0.85 (0.73)	1.18 (0.86)	0.97 (0.89)	1.20 (0.86)	.040
History of sexual assault	32 (41.0) a	36 (42.9) a	16 (17.6) b	19 (24.7) b	<.001
History of intimate partner violence	37 (47.4) a	37 (43.5) a	24 (26.4) b	34 (43.6) a	.021
History of incarceration	12 (15.4) a	25 (29.4) b	15 (16.7) a	16 (20.5) a, b	.102
History of transactional sex	5 (6.4) a	10 (11.8) a, b	4 (4.4) a	18 (23.1) b	.001
Ever been tested for HIV	67 (85.9) a	85 (98.8) b	87 (95.6) b	74 (94.9) a, b	.005
Protection used at last sexual encounter	11 (14.1) a	30 (35.3) b	21 (23.1) a, b	27 (34.6) b	.006

Notes: Letters denote the categories in which the proportions do not differ significantly.

**Figure 1: Reported STI History**



## RESULTS

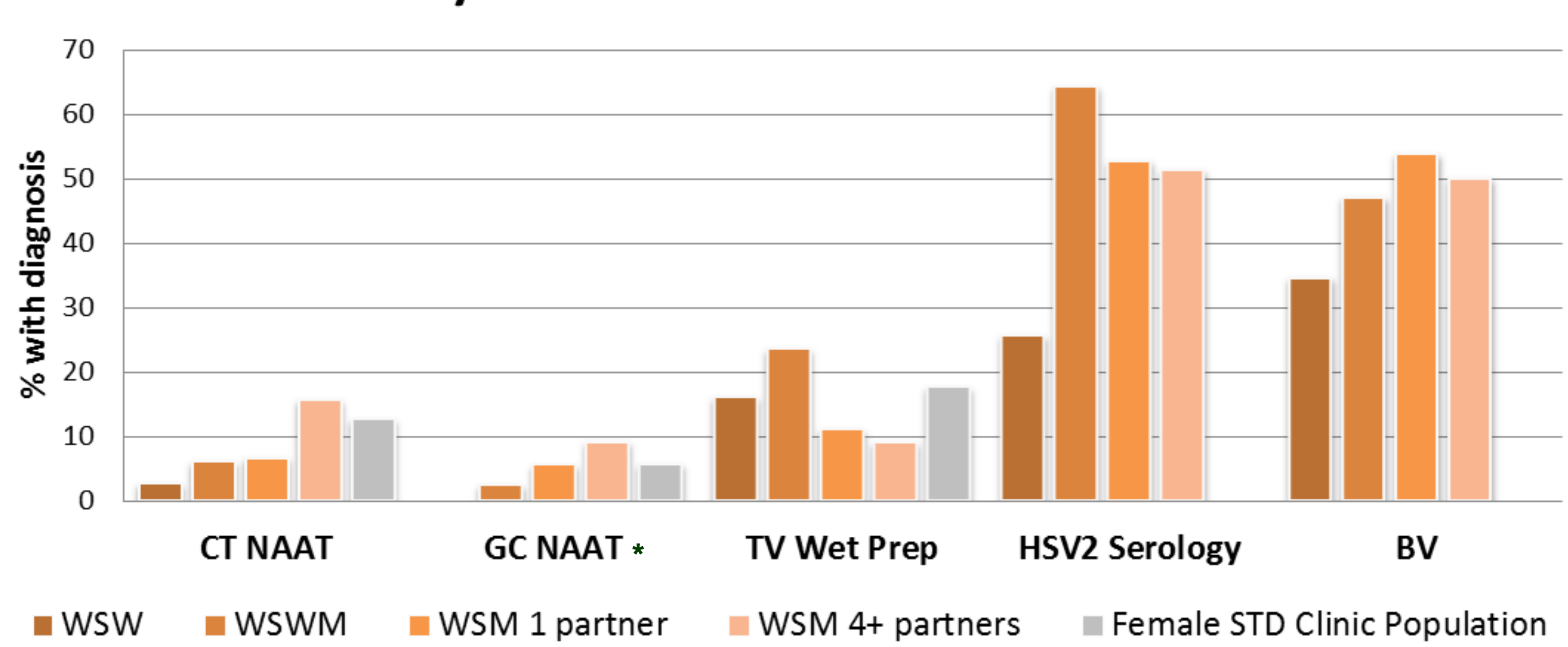
- WSWM have the highest prevalence of TV and HSV, and WSM with 4+ partners have the highest prevalence of CT and GC.
- For those STIs with reportable results (CT, GC) and TV the infection rates are higher in several subgroups than that of the general female population attending the STI Clinic.
- WSM with 4+ partners have the highest reported history of CT, GC, TV and HSV.
- There is a striking difference between the number of people reporting a history of HSV2 and the serologic test results.
- Risk factors were variable across groups.
- WSW and WSWM reported significantly higher rates of sexual assault.
- Close to half of the WSW, WSWM and WSM with 4 or more partners had experienced intimate partner violence.
- WSM with 4 or more partners had significantly less social support than the other groups. Women with 4 or more partners and WSWM had significantly higher depression scores than WSW or WSM with 1 partner.
- There was high prevalence of prior incarceration among all groups.

## CONCLUSIONS

- There is not a clear continuum of risk for STI acquisition among the women in our study.
- STI risk varies depending on the organism (CT, GC, TV, HSV) in addition to social and demographic factors.
- Women in this study display some protective behaviors such as testing for HIV.
- Educational messages need to address STI risk in all sub-populations of women, including those traditionally seen as at low risk.

References available upon request.

**Figure 2: STI Diagnosis at Current Visit, by Partner Gender and Number**



\* Note: There were no diagnoses of GC in the WSW group.