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Translating Science into Practice

Do Sex and Drug Behavior Patterns Account for HIV/STD Racial Disparities?

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Population-Based Sample of Adolescents and Young Adults

- National Longitudinal Study of Adolescent Health (Add Health)
- Cluster analyses (K-Means) on self-reported sex and drug behaviors
- 4 a priori clusters: lifetime abstinence from sex & drugs, sex for money, IV drug use, MSM
- Total of 16 clusters, each person assigned to one cluster (handout)
- Analyses at Wave 3 (limited to non-Hispanic blacks and whites, with no missing STD data)
- Associations between risk behaviors (survey) and STD/HIV (bio-specimens), by race & gender



Wave III
Ages 18-26
Non-Hispanic Blacks and
Whites
N=8,706

Table 1. Prevalence of Add Health Tested STD/HIV Infections by Race

	White		Black	
	Prevalence	(95%CI)	Prevalence	(95%CI)
Chlamydial infection	1.9	(1.5-2.5)	12.5	(10.2-15.3)
Trichomoniasis	1.2	(0.9-1.5)	6.9	(5.4-8.8)
Gonorrhea	0.1	(0.0-0.3)	2.1	(1.5-3.1)
HIV	--	--	0.5	(0.2-1.0)
STD/HIV Combined	3.1	(2.6-3.8)	18.8	(16.1-21.8)

STD/HIV Infection by race and gender

Black women: 22.8%

Black men: 14.6%

White women: 3.7%

White men: 2.6%

STD/HIV Infection By Covariates

		% positive for STD/HIV
Marital Status	Not Married	6.6*
	Married	3.8
Dropped Out of High School	Dropout	9.9**
	Not dropout	5.5
Functional Poverty	Poverty	8.8 **
	No poverty	5.7
Condom Use Last Intercourse	Not used	6.2
	Used	7.6
Age First Intercourse	Age 14 or younger	9.7**
	> Age 14	5.8

*p < .01, **p < .001

Percent Covariate Characteristics By Race and Gender

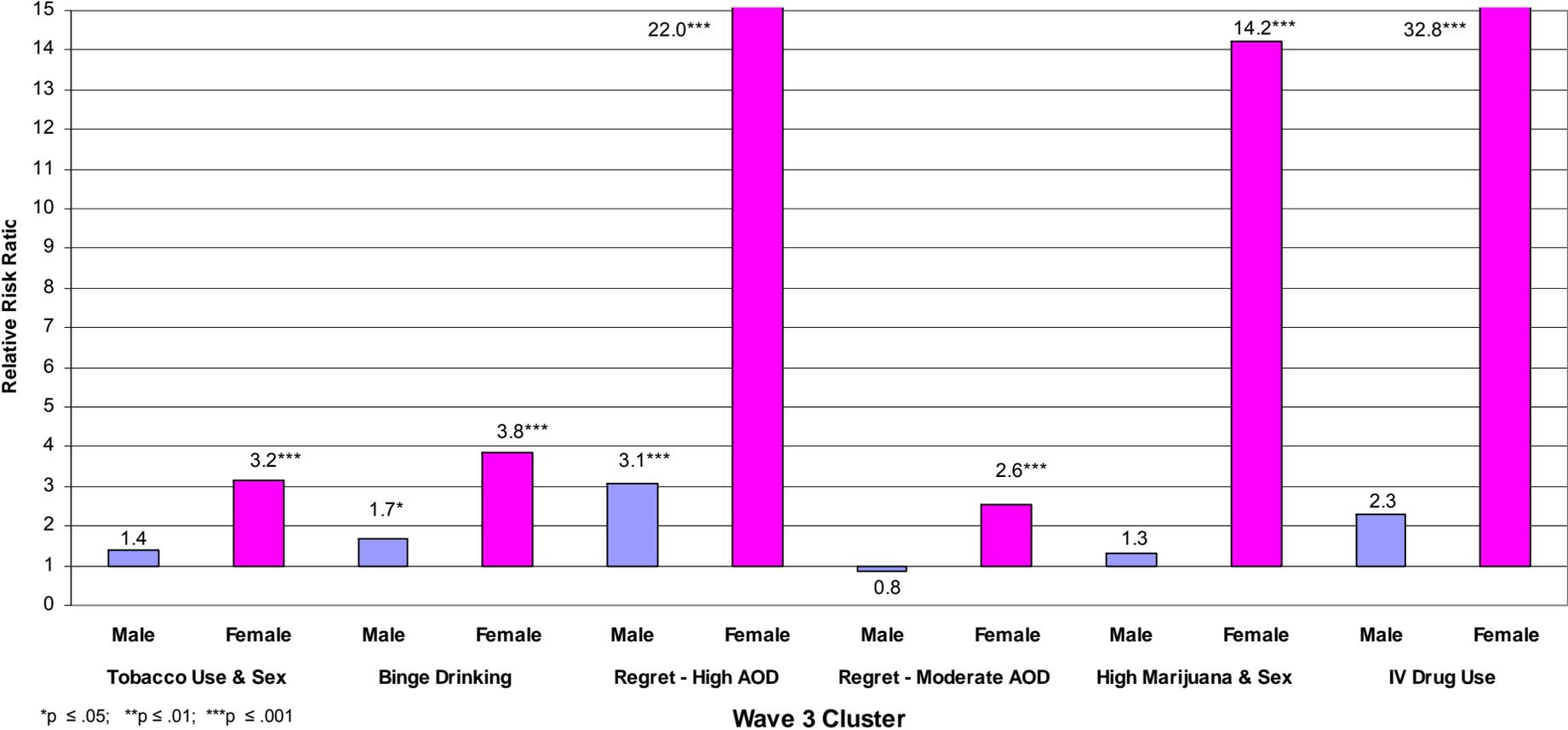
	Blacks		Whites	
	M	F	M	F
	%		%	
Married	10	13	13	23
Dropped out of high school	23	16	14	12
In functional poverty	17	24	11	15
Condom used last intercourse	58	48	43	32
Age 14 or younger	32	23	15	19



Handout:
Sex and Drug
Behavior Clusters

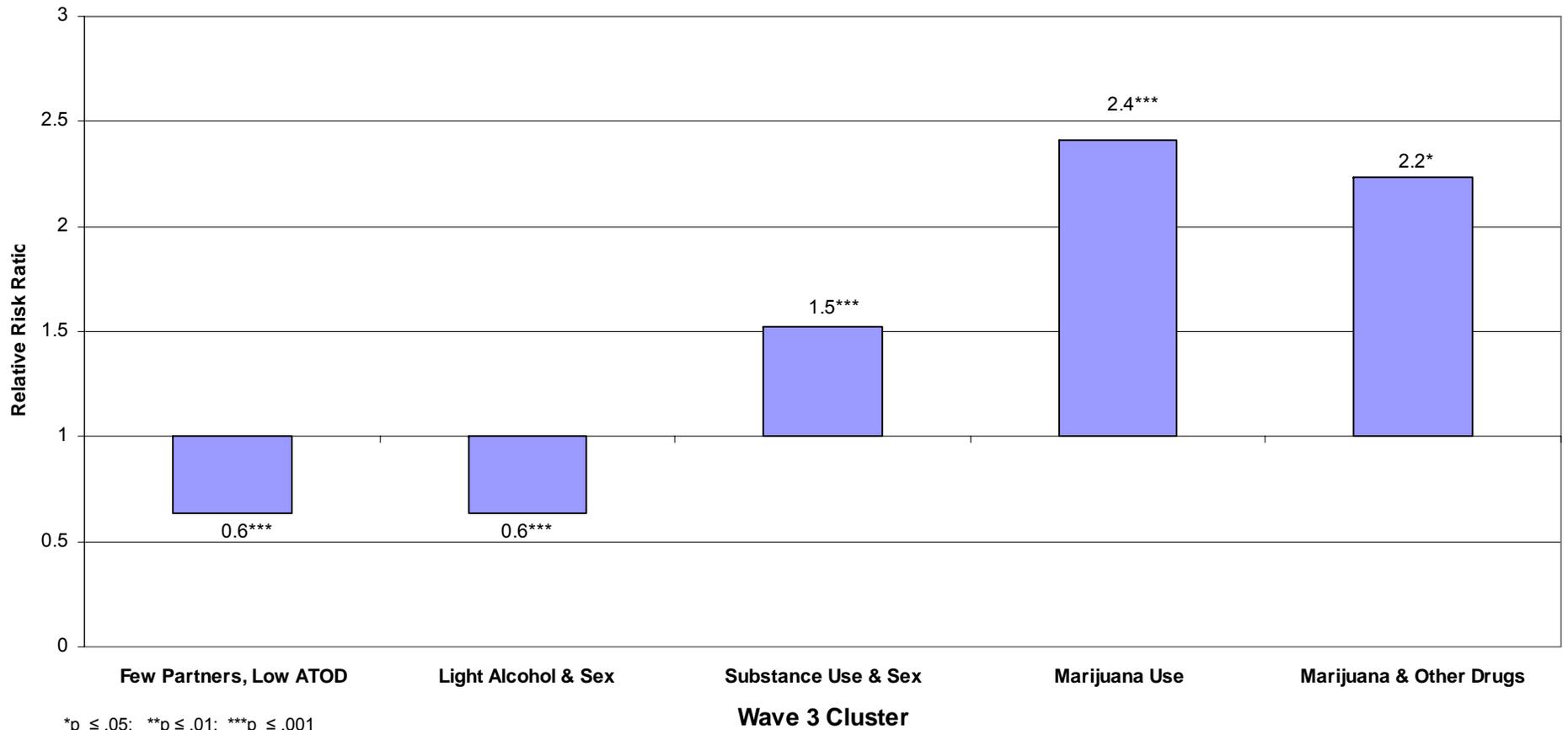
Risk Ratios for Whites Relative to Blacks, Conditional on Gender - Wave 3

Controlling for age, school dropout, and functional poverty
and with Low Risk Behavior as the referent cluster



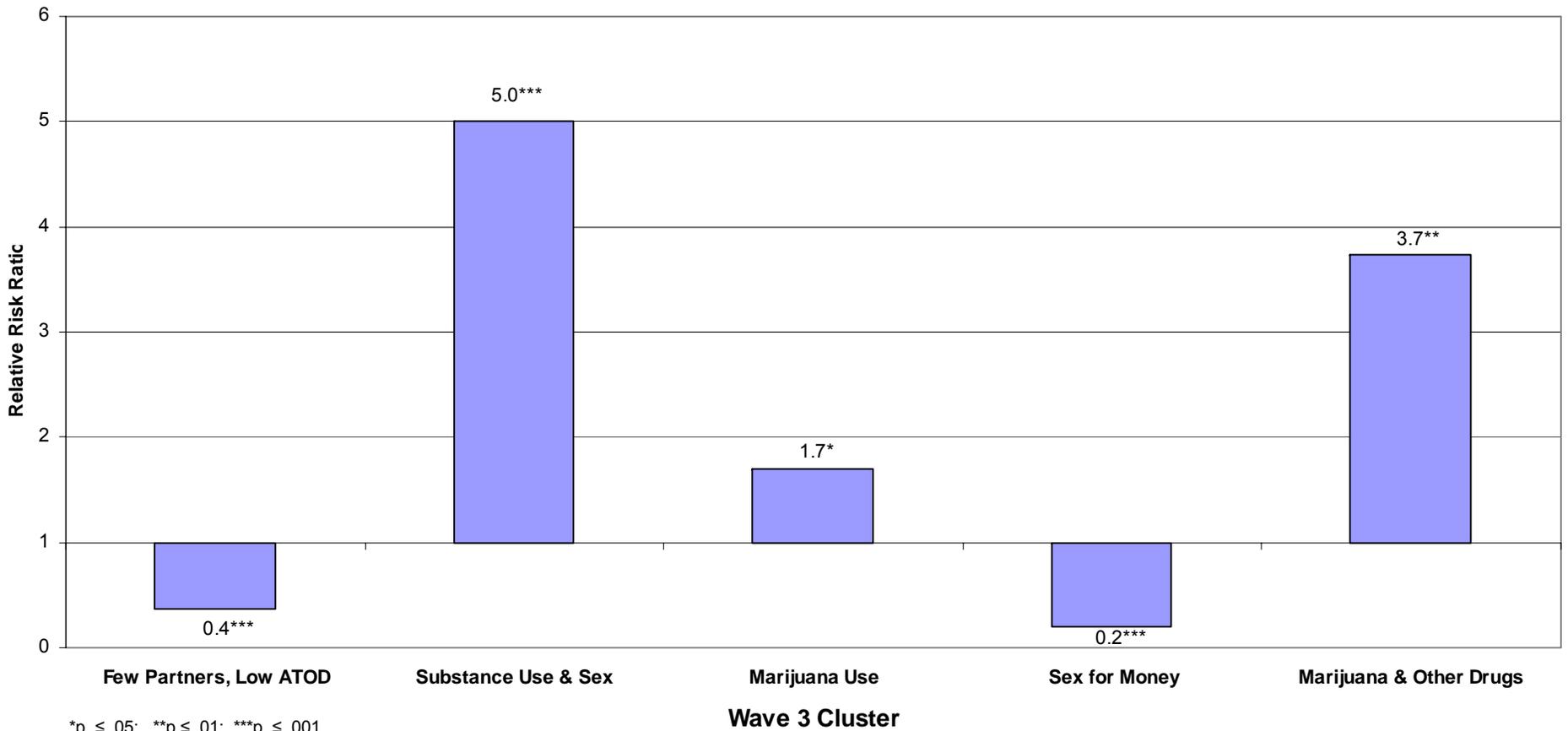
Risk Ratios for Males Relative to Females by Wave 3 Cluster

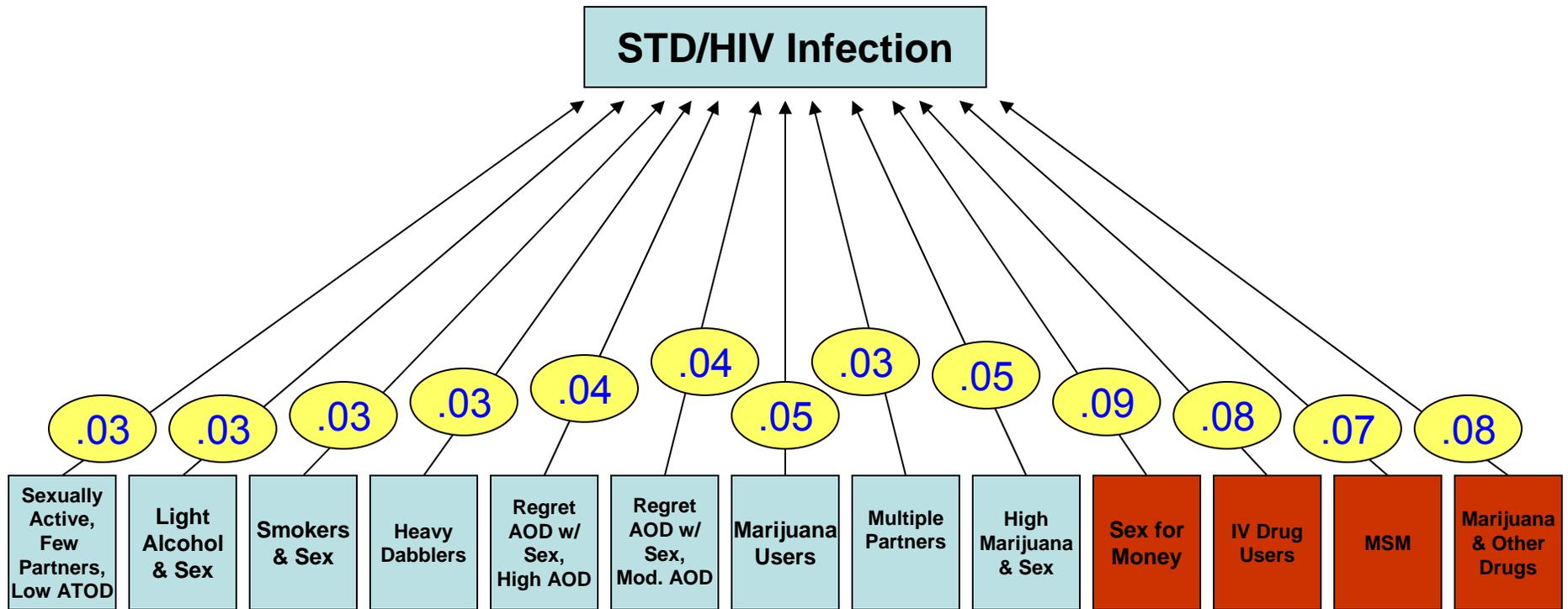
Controlling for age, school dropout, and functional poverty
and with Low Risk Behavior as the referent cluster



Risk Ratios for Whites Relative to Blacks By Wave 3 Cluster

Controlling for age, school dropout, and functional poverty
and with Low Risk Behavior as the referent cluster



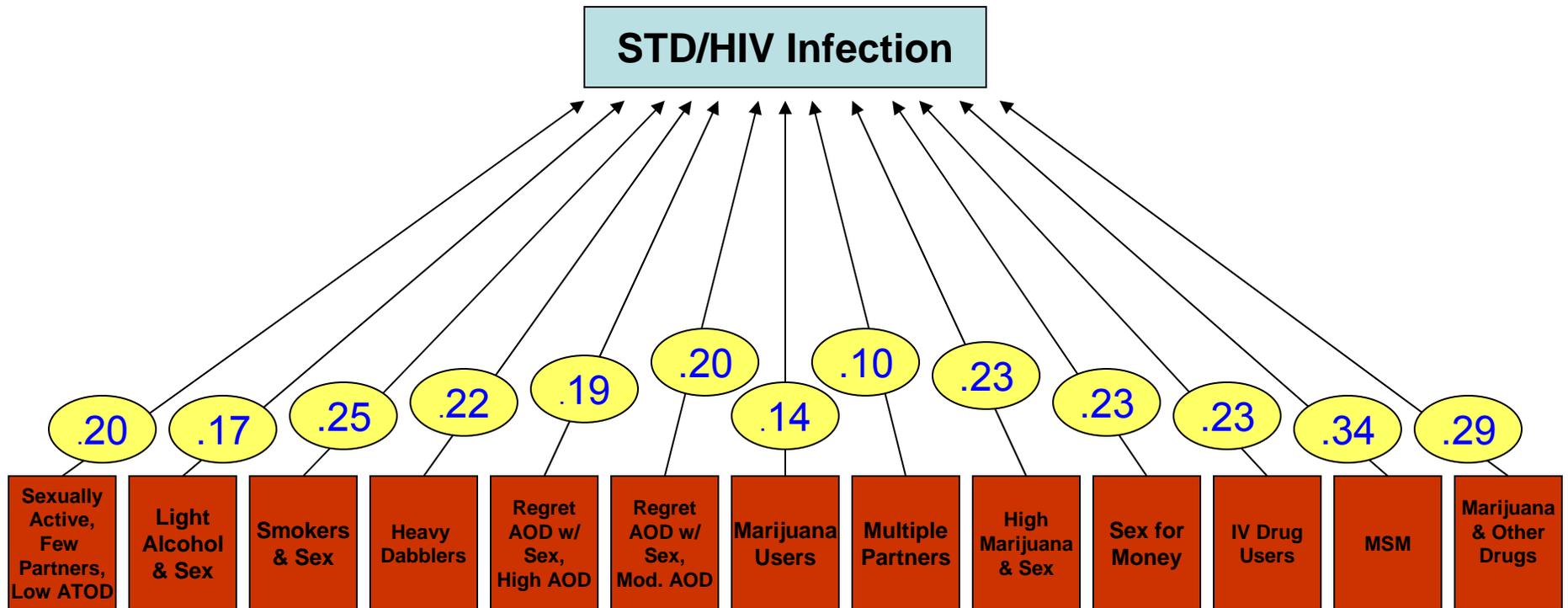


Whites

(Red clusters = infection rates >.06)

WAVE3

(Young Adults Ages 18-26)



Blacks

(Red clusters = infection rates > .06)

WAVE3

(Young Adults Ages 18-26)

Table 4. Prevalence odds ratios for blacks relative to whites from logistic regression models of STD/HIV infection

	Unadjusted OR	(95% CI)	Adjusted* OR	(95% CI)
Few Partners, Low ATOD (n=1613)	7.8	(4.5-13.4)	7.1	(4.1-12.3)
Light Alcohol & Sex (n=1368)	6.3	(3.5-11.4)	5.8	(3.2-10.6)
Low Risk Behavior (n=1016)	28.9	(7.8-107.0)	24.9	(7.1-87.2)
Smokers & Sex (n=864)	9.1	(3.7-22.7)	9.1	(3.8-21.6)
Binge Drinkers (n=648)	8.0	(3.0-21.0)	6.4	(2.0-20.6)
Substance Use and Sex (n=556)	9.7	(2.6-36.0)	8.7	(2.1-35.2)
Regret AOD with Sex, High AOD (n=487)	7.8	(2.3-25.7)	7.2	(1.7-30.2)
Regret AOD with Sex, Moderate AOD (n=458)	3.9	(1.5-10.1)	4.0	(1.6-9.9)

*Adjusted for gender, marital status, dropped out of school, functional poverty, age at first intercourse.

Table 4. Prevalence odds ratios for blacks relative to whites from logistic regression models of STD/HIV infection (Cont'd)

	Unadjusted OR	(95% CI)	Adjusted* OR	(95% CI)
Marijuana (n=387)	3.3	(1.1-10.0)	3.4	(1.2-9.6)
Multiple Partners (n=285)	3.0	(0.9-9.9)	2.7	(0.8-9.3)
High Marijuana and Sex (n=208)	6.2	(1.3-29.7)	6.8	(1.9-24.7)
Sex for Money (n=196)	2.8	(0.9-9.2)	2.7	(0.8-9.4)
IV Drug Users (n=72)	7.0	(0.8-64.3)	18.7	(0.1-5647.3)
MSM (n=82)	7.1	(1.5-33.5)	9.8	(1.8-52.8)
Marijuana and Other Drugs (n=54)	4.8	(0.7-31.2)	7.4	(1.4-38.5)

*Adjusted for gender, marital status, dropped out of school, functional poverty, age at first intercourse.

Conclusions

- Whites show the expected relationship between higher risk behaviors and greater risk for HIV/STD, but African American young adults do not.
- African American young adult women are the least likely to engage in alcohol, tobacco, and other drug use behaviors but the most likely to acquire STDs.
- HIV/STD racial disparities may be influenced by complex structural and contextual factors. For example, other studies suggest that sexual partnerships are segregated by race, and that crossover between high and low risk groups is more likely among blacks than whites.
- Current findings show large differences: in school dropout and sexual debut among men by race; in marriage rates among women by race; and in functional poverty by race.
- School dropout may be an especially critical factor to consider, since it is related to increased incarceration, decreased marriage, and increased poverty, and may help drive risk group crossover.