Incarceration, Sexually Transmitted Infection (STI), and Risky Sexual Behaviors in a Probability Sample of Urban Young Adults



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1. Introduction

Linkages between incarceration, STI and risky sexual behaviors have typically been generated from selfreports among prison or jail inmates or other special populations (Thomson 2009, Khan 2008, Hardick 2003, Hammett 2006, Harawa 2008, Adimora 2005). At least one ecologic study linked high rates of incarceration with high rates of STI at the census block level (Thomas 2005, 2007). These studies also point to the nexus of illicit drug use, incarceration, HIV/AIDS, and racial/ethnic sexual health disparities.

Fewer studies have investigated current STI and recent incarceration at the population level. In this analysis, we examine the relationship among recent incarceration and current STI and risk behaviors among a probability sample of young adults in Baltimore MD, an urban community identified with high rates of STI and incarceration. Resulting estimates are generalizable to Baltimore residents ages 15 to 35 years.

Monitoring STIs Survey Program (MSSP)

The MSSP provides continuous monitoring of trends in three STIs (trichomonas, chlamydial and gonoccocal infection) among a probability sample of young adults in Baltimore, MD. Participants are surveyed through private telephone audio computer-assisted survey interviews (TACASI), and provide urine specimens through the mail.

2. Objective

To examine relationships among recent incarceration, current STI, and risk behaviors in a probability sample of inner-city young adults, with a particular emphasis on women and their partners.

3. Methods

- Data collected on all three years of the MSSP study, 2006–2009.
- Interviews conducted on 2936 participants; specimens received from 2120 (72%).
- Measures of interest: Incarceration >24 hours within the past year or more than a year ago; Partner incarceration >24 hours within the past year or more than a year ago.
- Analyses:
- prevalence of incarceration by race, sex, age, and education,
- bivariate and multivariate associations between incarceration and risk behaviors / STI, by gender.
- Bivariate and multivariate associations were assessed using Poisson regression. All analyses took into account the complex sample design, and were performed using Stata, version 10. Results are preliminary.

4. Results

- Mean age 24.6 years.
- 52% Female.
- 5% Other.
- 53% Females].
- 77% never married.

[Table 1]

- than Females (11%).

- more than a H.S. education.

Incarceration by Gender and Age [Figure 1]

- Among persons between 20–24:
- vear
- year.

Incarceration and Sexual Risk Behaviors [Figure 2]

Females and Males recently incarcerated exhibited more risky sexual behaviors than those not incarcerated in the past year^a:

- Multiple (3+) partners past year
- Partner last year had other partner
- Illicit drug use in past year
- Traded sex for money or drugs in the past year

Incarceration and Current STI

- associated with current STI.
- recently incarcerated.

Population Demographics among Persons Aged 15–35

60% Non-Hispanic (NH) Black, 30% NH White, 5% Hispanic,

56% had no more than a high school education [60% Males,

27% of persons age 19+ unemployed.

Estimates of Incarceration, Self and Partner, by Fender

Males (24%) more likely to report a history of incarceration

37% of Females and 11% of Males (not shown) reported a sexual partner who was ever incarcerated.

20% of Black Females reported having a partner incarcerated within the past year, compared to 7% of Non-Black Females.

20% of Females with <H.S. education reported a recently</p> incarcerated partner, compared to 10% of Females with

7% of Females reported recent incarceration within the past

24% of Females reported a recently incarcerated partner. 14% of Males reported recent incarceration within the past

5% of Males reported a recently incarcerated partner.

^a Prevalence Ratio (PR) for recent incarceration versus non-recent incarceration, adjusted for race, age, employment, and education, was significant (at P<0.05) for each risk factor within gender group.

The data demonstrated that being incarcerated is associated with a number of risky behaviors, such as having multiple partners, which were also associated with STI (not shown).

Given this nexus of risky behavior, we would expect being incarcerated, or having a partner who was incarcerated, was

Table 2 shows that Females and Males who were recently incarcerated also tested positive for current STIs (chlamydia, trichomoniasis, and/or gonorrhea), compared to those not

Females with recently incarcerated partners remained at increased risk for current STI, even after adjustment for age, race, employment, and education.

Table 1. Incarceration, Self and Partner, by Gender

	Total	Black^b	Non- Black	P	HS or less	More than HS	P
Females – Incarcerated >24 hours				0.001			<.001
Incarcerated within past yr	3.5%	4.2%	2.2%		6.0%	0.6%	
1+ year ago	7.8%	9.9%	4.3%		11.0%	4.2%	
Never	88.7 %	85.8%	93.5%		83.0%	95.2%	
Females – Partner Incarcerated >24 hours				<.001			<.001
Incarcerated within past yr	15.3%	20.2%	7.3%		19.7%	10.4%	
1+ year ago	21.8%	26.8%	13.5%		23.6%	19.7%	
Never	62.9 %	52.9%	79.2%		56.7%	69.9%	
Males – Incarcerated >24 hours				<.001			<.001
Incarcerated within past yr	10.2%	13.3%	5.9%		14.6%	3.7%	
1+ year ago	14.0%	18.6%	7.7%		18.8%	6.7%	
Never	75.8%	68.1%	86.5%		66.6%	89.6%	

^bNon-Hispanic Black

Figure 1. Incarceration by Gender and Age

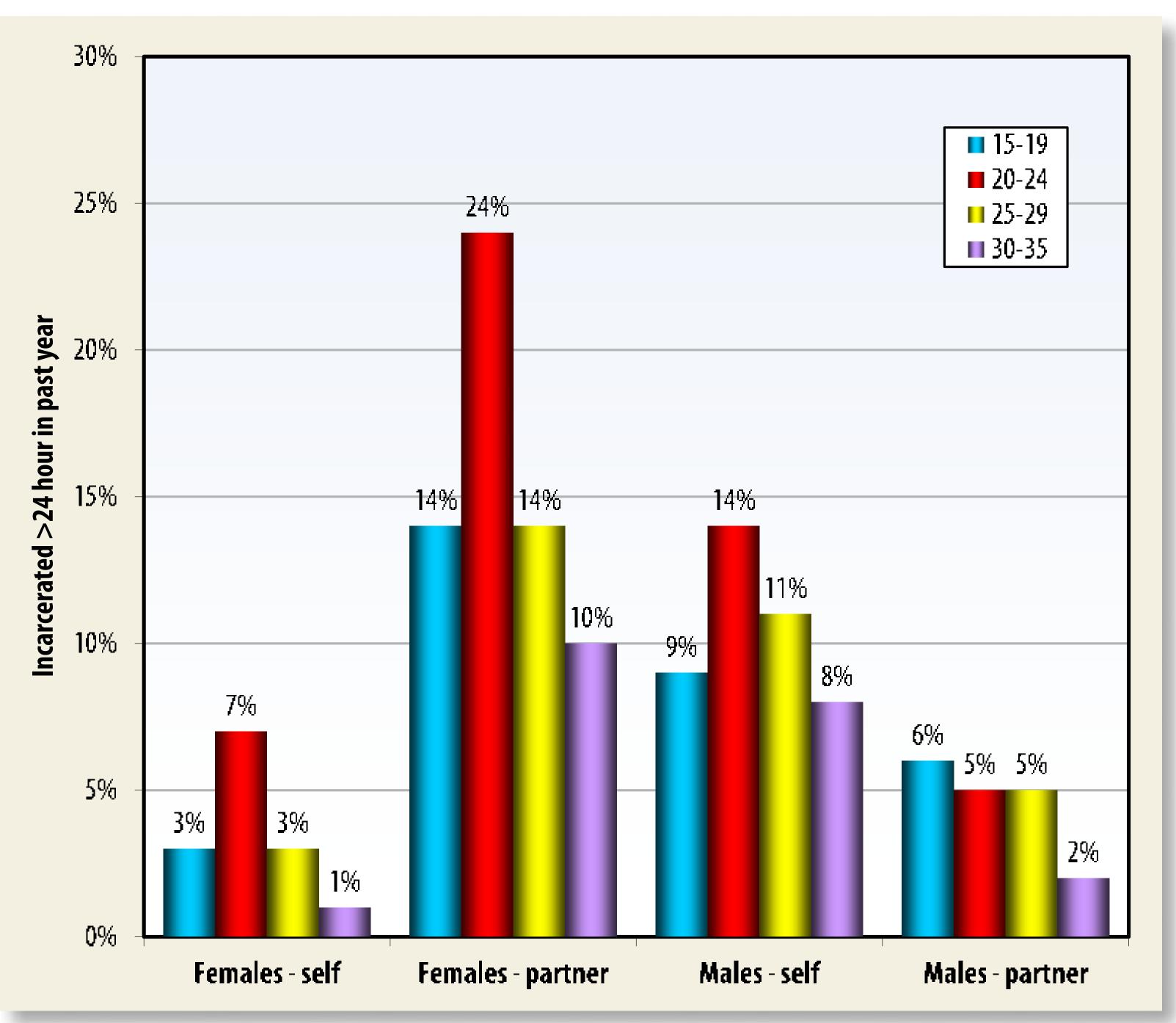
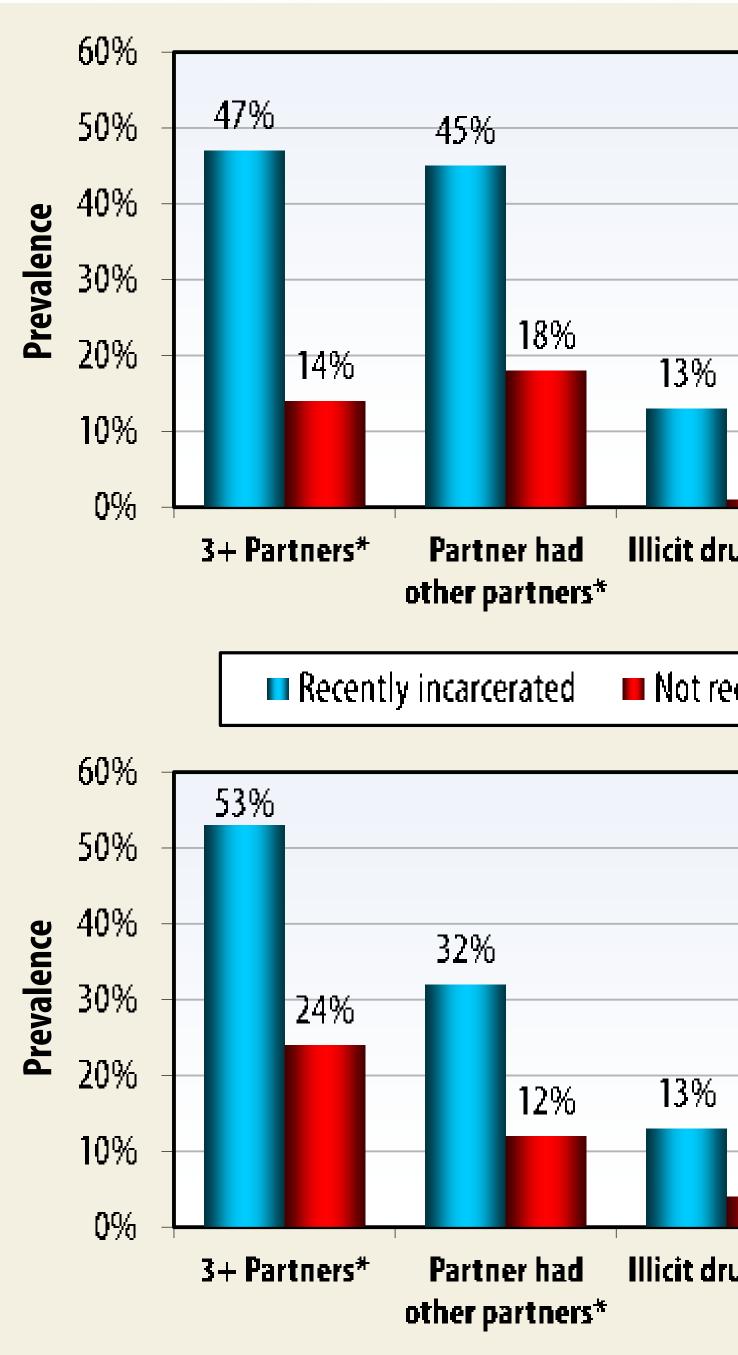


Figure 2. Risky Sexual Behaviors in the Pa **Incarceration Status**



* Prevalence Ratio significant (P<0.05), after adjustment for race, age, employment, and education.

Table 2. Recent Incarceration and Current STI

	%	PR	Adj ^c PR (CI)			
Females						
Incarcerated past year	28.4	2.1	1.6 (0.9, 2.8)			
Not incarcerated past year	13.5					
Partner incarcerated past year	30.1	2.7	2.2 (1.5, 3.1)			
Partner not incarcer- ated past year	11.0					
Males						
Incarcerated past year	14.4	2.3	1.7 (0.8, 3.7)			
Not incarcerated past year	6.2					
Partner incarcerated past year	16.1	2.5	1.7 (0.5, 5.5)			
Partner not incarcer- ated past year	6.6					
Prevalence Ratio and 95% CL adjusted for race age employment and						

^c Prevalence Ratio and 95% C.I., adjusted for race, age, employment, and education.

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	16%		
1%		2%	
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4%		3%	
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5. Study Limitations

- Data were cross-sectional; temporal associations between incarceration, risky behaviors, and STI cannot be determined.
- The survey did not include questions on length of time, number of times, or reasons for incarceration.

6. Conclusions

- In this young, urban population, males were more likely than females to report a history of incarceration.
- One in three females reported a sexual partner with a history of incarceration.
- Incarceration was found to be significantly associated with a multitude of risky sexual behaviors, and with current STI.
- In an urban environment, self- or partnerincarceration may act as markers of risky sexual behavior.

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