Partner Incarceration and African-American Women's Sexual Relationships and Risk: A Longitudinal Qualitative Study

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ABSTRACT *Racialized mass incarceration is associated with racial/ethnic disparities in HIV and other sexually transmitted infections (STIs) in the US. The purpose of this longitudinal qualitative study was to learn about the processes through which partner incarceration affects African-American women's sexual risk. Four waves of in-depth qualitative interviews were conducted in 2010–2011 with 30 women in Atlanta, Georgia (US) who had recently incarcerated partners. Approximately half the sample misused substances at baseline. Transcripts were analyzed using grounded theory. For over half the sample (N=19), partner incarceration resulted in destitution, and half of this group (N=9) developed new partnerships to secure shelter or food; most misused substances. Other women (N=9) initiated casual relationships to meet emotional or sexual needs. When considered with past research, these findings suggest that reducing incarceration rates among African-American men may reduce HIV/STIs among African-American women, particularly among substance-misusing women, as might rapidly linking women with recently incarcerated partners to housing and economic support and drug treatment.*

KEYWORDS *Incarceration, HIV, Sexually transmitted infections, Qualitative methods, Longitudinal methods, Health disparities, African-American women*

INTRODUCTION

Recent ecologic studies have found that geographic areas in the United States (US) that have high incarceration rates also have high prevalences of sexually transmitted infections (STIs) and sexual risk.^{1–4} This association may be particularly relevant to efforts to understand and intervene in the determinants of racial/ethnic disparities in STIs^{5,6} since predominately African-American communities experience disproportionately high incarceration rates.^{7,8} One set of mechanisms that may drive the ecologic relationship between incarceration rates and STI prevalence is the effect of losing a partner to prison or jail on women's sexual relationships and risk. The purpose of this longitudinal qualitative study is to explore African-American women's perspectives about how partner incarceration influences their sexual relationships and sexual risk behaviors.

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Racialized Mass Incarceration

During the last four decades, racialized mass incarceration has emerged as a potent social force in the US. Between 1925 and 1973, incarceration rates were approximately stable at 100/100,000, a rate comparable to the current incarceration rate in Western Europe;⁹ by 2009, however, the US incarceration rate had reached 750/100,000.⁸ That year, 208,118 people were incarcerated in federal prisons, 1.4 million people were incarcerated in state prisons, and another 760,000 were in jail.¹⁰

Racial/ethnic disparities in incarceration have also increased: while African-American adults were twice as likely to be incarcerated as Whites in the late nineteenth century, they are now approximately seven times more likely.^{11,12} African-American men have been particularly hard hit. In 2011, 7 % of African-American men aged 25–39 were behind bars, the highest incarceration rate of any other racial/ethnic and gender group.¹³ Western and Muller estimate that 69 % of African-American men who do not have a high-school diploma and who were born since 1975 will spend time in prison before the age of 34.¹² They have thus called incarceration a “normal life event” for disadvantaged African-American men.^{12, p.235}

Racialized mass incarceration can be understood as a form of de facto structural discrimination. The War on Drugs, which escalated in the 1980s, is responsible for a large proportion of the rise in incarceration rates among African-Americans.^{8,12} Intensive drug-related policing activities tend to be concentrated in predominately African-American (and Latino) neighborhoods; mandatory-minimum sentences have been implemented for possessing small amounts of crack, a drug that has historically been more likely to be bought, sold, and consumed in predominately African-American communities; and stiffer penalties are often imposed for drug activity in school zones, which cover a higher proportion of land in urban communities than in suburban or rural communities.^{8,14}

Mass Incarceration and Sexually Transmitted Infections

Stark racial/ethnic disparities exist in the US in STIs. In 2010, the HIV diagnosis rate among African-Americans was eight times that among Whites.¹⁵ That same year, the rate of reported gonorrhea cases was 18.7 times greater among African-American adults than among White adults, and diagnosis rates for Chlamydia and Syphilis were approximately eight times greater among African-American adults.¹⁶

Multiple pathways may link mass incarceration of African-American adults (particularly African-American men) to high rates of HIV and other STIs among African-American women and men. The large-scale forced migration of African-American men into prisons and jails, for example, reduces male/female sex ratios in predominately African-American communities; low sex ratios, in turn, may increase concurrency and partner turnover and reduce condom use in these communities.^{1,17–19} Concurrency (defined as overlapping partnerships) and partner turnover (i.e., high numbers of sequential partners over time) increase vulnerability to infection and are key drivers of HIV/STI epidemics.^{20–22} Additionally, when men are released from prison or jail they may engage in high-risk sex.²³ One additional potential pathway is the possible impact of losing a partner to prison or jail on women’s sexual relationships and risks. During this era of mass incarceration, partner incarceration has become an increasingly common phenomenon for African-American women. A population-based study of African-American adults (aged 18–61) in 13 rural counties in North Carolina found that 52 % of women reported that

≥ 1 of their last three sex partners had *ever* been incarcerated²⁴; 15.3 % of young women in Baltimore, Maryland reported that their sex partner had been incarcerated in the past year.²⁵

Partner incarceration appears to powerfully affect women's HIV/STI risk. Research suggests that this experience may increase the number of partners women have during their lifetimes: more than half of relationships with an inmate end while he is incarcerated,^{2,26} and women with a recently incarcerated partner are almost five times more likely than other women to report >5 sexual partners in the past year.²⁵ Rogers et al. have found that women who have recently experienced partner incarceration are 2.8 times more likely to report partner concurrency in the past year and more likely to have a current STI.²⁵ Other studies corroborate these findings, and suggest that these women are more likely to exchange sex for drugs or money and to have high-risk partners.^{24,26-28} Women may seek new partners as a way of moving on with their lives and to help them meet economic needs.^{2,26}

It is, however, challenging to study and measure partner incarceration. Most studies assess the effects of having a partner who has *ever* been incarcerated or examine associations between having a recently incarcerated partner and recent sexual behaviors. These designs make it difficult to identify specific effects of partner incarceration and to describe the pathways linking partner incarceration to women's HIV/STI risk. These pathways might be quite complex. Sociological and criminological research has found that partner incarceration introduces severe economic hardship into women's lives²⁹⁻³⁴, and that women may face hostility from their families and communities because of their partner's incarceration, even in areas with high incarceration rates^{30,31,33,34}. Women may also experience depression and loneliness³⁰⁻³⁴. The extent to which these (and other) life changes affect women's sexual relationships and risk has not been explored in depth.

This longitudinal qualitative analysis explores pathways through which recent partner incarceration may influence sexual relationships and risk in a cohort of African-American women. Since substance-misusing women may be particularly likely to experience partner incarceration and since the ramifications of partner incarceration may vary by substance misuse status, we explore this topic in a sample that varies by baseline substance misuse. We have described partner incarceration and women's substance-misuse trajectories in detail elsewhere.³⁵ This inquiry was broadly guided by the Social Ecologic Model, a model that posits that health behaviors are shaped by processes operating within and across multiple levels of life, including communities, networks, dyads, and individuals.³⁶ We conceptualized racialized mass incarceration as a societal exposure that might affect African-American women's HIV risk by altering dyadic relationships and individual economic circumstances, and highlighted the possibility that women's individual substance misuse and network-level (i.e., family-level) and community-level supports might shape the consequences of partner incarceration.

METHODS

Design and Sample

To be eligible to participate in this longitudinal qualitative study, an individual had to (1) be an African-American woman aged 18-64 years, (2) live in the Atlanta metropolitan area, and (3) have a primary male partner who had been incarcerated (entered prison, jail, or detention) in the past 12 months and who was expected to be

incarcerated for at least 6 months more. Maximum variation sampling methods were used to create a sample in which about half of the participants reporting substance misuse at baseline.³⁷ Substance misuse included the use of illegal drugs or abuse of alcohol (e.g., binge drinking) at least three times in the past 3 months or currently being in drug/alcohol treatment.

With approval from relevant institutions (e.g., wardens, directors of programs), we recruited participants in prisons and jail waiting rooms, drug treatment, and harm reduction programs, and shelters. Recruitment at these sites was both passive (i.e., we posted fliers) and active (study staff were often on-site to speak with potential participants one-on-one); recruiters skipped questions about substance use when screening in jail and prison waiting rooms (these questions were asked via phone later). Additionally, public defenders shared information about the study with defendants' families post-sentencing.

Data Collection and Retention

Data collection began in 2010. We gathered four waves of data with each participant. At each wave, data collection included a one-on-one semi-structured qualitative interview and a brief survey that queried sociodemographic characteristics and substance misuse (binge drinking, illegal drug use, and dependence symptoms^{38,39}). The baseline qualitative interview explored the following domains: relationship with incarcerated partner (pre- and post-arrest), other sexual relationships and behaviors, economic and housing issues, social relationships, parenting, and substance misuse. Wave 2–4 semi-structured interviews and surveys focused on *changes* in each domain since the previous wave. Wave 2, 3, and 4 data collection occurred 2, 6, and 10 months after baseline, respectively. Interviews lasted 90–120 min; each was audiotaped and transcribed verbatim. Interviews were conducted in private places that felt safe to participants and interviewers. These places included participants' homes, a local harm reduction center, and Emory University. Participants received \$25 for each interview.

We developed an intensive retention strategy to reduce attrition. Strategies included monthly phone calls, financial incentives for monthly phone contacts, and contacting members of participants' social networks as needed.

Data Analysis

Grounded Theory methods were used to analyze transcripts.⁴⁰ In the open coding phase, central concepts were coded in each line of data in ATLAS.ti.⁴¹ A codebook was developed and a single set of codes applied to all transcripts (e.g., "new partner," "financial support"). Concepts were then synthesized into higher order categories, which were mapped onto axes in terms of their properties (attributes of a category) and dimensions (variations in those properties). The axial coding phase explored categories and their inter-relationships over time. Finally, selective coding integrated major categories to create a conceptual model of the processes through which partner incarceration related to women's sexual relationships over time. In this analysis, the impact of partner incarceration on women's economic status emerged as a potent organizing category, and so this category became the backbone of our findings.

We went through an iterative process of developing a preliminary conceptual model, seeking "negative cases" (i.e., cases that did not fit that preliminary model), and attempting to refine the model so it incorporated this case while remaining

cohesive. In the end, there was one case that we could not incorporate into the model. We describe it at the close of the “Results” section.

A team of four researchers conducted the analysis; team members consisted of the Principal Investigator and three graduate research assistants. During the open coding process, team members met weekly to develop and define new codes, revise the definitions of established codes in response to new data, and review one another’s coded transcripts to enhance consistency of coding across transcripts. In later analytic stages, the first author shared initial findings and received critiques from other team members.

Descriptive statistics (e.g., means, standard deviations) were calculated using survey data and frequencies extracted from the qualitative interviews (e.g., number of sexual partners).

ETHICS

Protocols were approved by Emory University’s Institutional Review Board. We obtained a federal certificate of confidentiality to protect participants. To ensure that all women understood the purpose, contents, risks, and benefits of the study, and their rights as participants (including the right to refuse to answer questions or to withdraw from study participation), interviewers read consent forms aloud and women kept a copy of the consent form for their records. Interview materials were either stored in a HIPAA-compliant server accessed via password-protected computers or in a locked cabinet to which only study staff had access.

RESULTS

Thirty women enrolled in the study; 100 % complete all waves of data collection. The mean age at baseline was 33 (SD=11.54) and 33 % had some college and 33 % were college graduates (Table 1). By design, baseline substance misuse varied across participants. Income declined after partners were arrested; in the 30 days preceding the partner’s arrest, the mean monthly household income was \$2431 (SD=\$1359) compared to \$1907 (SD=\$1371) in the 30 days preceding the baseline interview.

On average, participants had been in a relationship with their incarcerated partners for almost 5 years (SD=5.36) before they were incarcerated and 60 % had lived with these partners. On average, participants initiated sexual relationships with 1.45 men (SD=2.21) between the time that their partner was incarcerated and Wave 4. Trajectory-specific data are discussed below.

The qualitative analysis identified five trajectories, each defined by the dynamic interplay of the following analytic categories: (1) the impact of partner incarceration on women’s economic status; (2) the extent to which sustained and substantial economic support was rapidly available; and (3) the extent to which women formed new sexual relationships, either to survive economically or to fulfill emotional or sexual needs (Fig. 1). We discuss each trajectory below, describe whether and how women’s relationships with their incarcerated partners influenced the development of new partnerships, and compare women’s experiences by baseline substance misuse.

By design, women’s partners were expected to be incarcerated for ≥ 6 months after the screening. For most participants, this was the first time they had lost a partner for a prolonged period (i.e., potentially sentenced to several months or years), though several participants’ partners had been jailed briefly previously (e.g.,

for a few days or weeks). The trajectories described below thus represent relatively new experiences for most participants.

Section 1: Partner Incarceration, Destitution, and New Partnerships

More than half the sample ($N=19$) became destitute—either evicted from their homes or unable to pay for basic necessities (e.g., electricity)—within days or weeks of their partner’s incarceration; most of these participants ($N=13$) misused substances at baseline. Prior to their partners’ incarceration, all women were housed (usually in rental units) and only one discussed food insecurity or living without electricity during the months before her partner was incarcerated. For these 19 women, incarceration disrupted longstanding relationships. Women had been with their partners for 6.19 years on average ($SD=4.62$), and 16 had lived with their partners before incarceration. Sixteen had children, whom many were raising with their partners, regardless of whether these partners were biological fathers.

Within the context of these intertwined lives, these 19 women relied to some extent on their partners to pay for housing, food, and other necessities. Partner incarceration thus had significant economic consequences for women’s lives. The implications of these economic consequences for women’s sexual relationships depended on whether they had rapid access to substantial and sustained alternative sources of economic support. Variations in the availability of this support gave rise to Trajectories 1, 2, and 3.

Trajectory 1: Destitution and Forming New Partnerships to Survive

Economic Consequences of Partner Incarceration and New Sexual Relationships Each of the nine women in Trajectory 1 (T1) started new sexual relationships to secure housing or other basic necessities. While several T1 participants worked outside the home before their partners entered prison or jail (Table 1), they held part-time low-paying jobs that failed to cover their expenses. Other T1 women were caring for their children full-time or were unemployed; some had trouble getting jobs because of their own criminal records or their substance misuse. Severe substance misuse problems were common (Table 1); eight of the nine T1 women misused substances at baseline, reporting using heavily stigmatized drugs (e.g., cocaine, heroin), symptoms of dependence, or being in treatment.

Before they were incarcerated, partners generated income through a combination of legal and underground activities. Incarceration precipitated the immediate loss of this income, and within days or weeks of the incarceration event all T1 women had lost their housing because they were unable to pay rent.

“I wound up homeless...and I know if he’d been out here I wouldn’t have been... I couldn’t afford to pay [the rent]...we were sharing the money, the rent anyway...” (Kathy,* Wave 1)

While all T1 women subsequently developed new sexual relationships to secure housing and help cover basic living expenses, the timing of these new relationships

*All names are pseudonyms to protect participants.

varied. Some ($N=5$) initiated these new relationships rapidly (i.e., within days or weeks of their partners' incarceration), while others ($N=4$) were able to delay the initiation of these new "survival" relationships for several months. The immediate availability of family support differentiated women who delayed starting new survival relationships from those who started them rapidly.

Most women who rapidly sought new partners had been estranged from their families for some time because family members disapproved of women's drug use or of their partners. In the aftermath of eviction and in the absence of family support, women quickly moved in with new partners, who typically covered their living expenses. T1 women explicitly stated during interviews that they had initiated new relationships to survive, though emotional intimacy often developed over time; just one T1 woman discussed engaging in sex work. One participant discussed the formation of her new relationship:

"...he offered to help put me and my kids somewhere and I took the help and I regretted it at the time but I was also thankful for it because...he put us somewhere and not just let me and my kids be out on the street." (Imani, Wave 3)

While these initial relationships lasted—and provided ongoing economic security—for two women through Wave 4, they proved an unsuccessful long-term survival strategy for the remaining three women: relationships ended and women again lost their housing. The failure of these initial survival relationships precipitated a period of housing turmoil, and these three women reported living in ≥ 5 places over the rest of the study period. Over time, they cycled between getting housing through formal supports (i.e., shelters, residential drug treatment) and family members. As discussed elsewhere,³⁵ the possibility of living with family members, or of having them contribute money to cover rent, emerged as women reduced or ceased misusing substances.

These supports, however, were also not viable long-term sources of housing and economic security: relationships with family members soured, some family members charged rent that exceeded women's meager income, and shelter-based housing could be of poor quality. As a result, by Wave 4 these three women had turned to a new set of male partners to survive.

The other group of T1 women ($N=4$) were initially able to construct a safety net that allowed them to delay forming a new partnership to survive. Families were an instrumental part of these safety nets. For a variety of reasons (and in contrast to the other T1 women), women's substance misuse did not preclude rapid family assistance. One participant, for example, was young and her mother provided financial assistance and food as a part of her maternal role, despite her substance misuse. In addition to this family support, these women also seemed more likely than other T1 women to have additional (albeit insufficient) sources of income, including part-time jobs.

Over time, however, this safety net frayed. Some women lost their jobs, and family and institutional support proved unreliable or untenable in the long term. As these supports failed, women again became unable to afford rent, utilities, or food, and this time developed new sexual relationships to survive. New partners either filled the gap between their income and their living expenses or provided housing and covered all their bills.

Sexual Risk Behaviors On average, T1 women reported 3.25 ($SD=3.24$) new partners during the study period (defined as the period between partner

incarceration and Wave 4; Table 1). For most women, this was a stark departure from their recent past: they had been with the incarcerated partner for 7 years on average ($SD=5.77$), and few reported other partners during those years.

T1 women typically engaged in serially monogamous cohabiting partnerships, perhaps because these relationships provided the most extensive support (e.g., housing, steady income). Women tended to use condoms in the first few weeks of these relationships and then stopped. Relationships with new partners were complex, and, while women initiated these relationships to survive, some developed feelings of intimacy and love for their new partners and stopped using condoms as a consequence. While most discussed their concerns about HIV and other STIs, they felt that the partners with whom they had unprotected sex were “safe.” Women categorized their partners as “safe” for different reasons. Several believed that they spent so much time with their partners that they could not be having sex with other women concurrently, and thus were unlikely to become newly infected with HIV or another STI. Others believed that their partners must be negative because they were “old” (i.e., in their 50s or 60s) and older people were unlikely to have HIV or another STI. Additionally, one believed that her partner could not be infected because he was “a clean person and really [took] care of himself.”

Two T1 women engaged in direct concurrency (i.e., having >1 partner during the same period), and this only occurred when participants had casual or sex work partners; we defined “casual” partnerships based on participant characterizations (e.g., noting that partners were just “friends”). Women used condoms in these relationships. Such partners did not provide extensive financial support, and so women had several casual relationships simultaneously to meet their financial needs. As one participant noted,

“I got to make sure [the relationships are] beneficial...I got to be getting some type of bill paid...I had [one partner who] was the maintenance man... I had [another who was] the cable man.” (Jaden, Wave 2).

To the extent that we can assess indirect concurrency (i.e., having a partner who has another partner), analyses suggest that indirect concurrency also only occurred in casual relationships.

Relationships with Incarcerated Partners Nearly all (8/9) T1 women ended their relationships with their incarcerated partners by Wave 4. Women typically ended relationships because they believed it was impossible to have a positive post-release future with these men. As discussed elsewhere,³⁵ most T1 women used substances with their partners prior to their incarceration and tried to “get their lives back on track”—including reducing or ceasing their substance misuse—while partners were incarcerated. Women worried that their partners would revert to the “street life” upon release, jeopardizing their own ability to remain on their new positive track. Additionally, some incarcerated partners received long sentences, and women believed that no satisfying shared life with these men would have been possible for many years.

T1 women also ended their relationship with incarcerated partners because of the poor quality of their pre-incarceration relationships. Several men were violent or non-monogamous before they were incarcerated; many non-violent relationships were conflict-ridden.

TABLE 1 Characteristics of African-American women (N=30) in a qualitative study of partner incarceration and sexual relationships; substance misusers were oversampled

Characteristic	Total sample (N=30) ^a	Trajectory 1 (N=9)	Trajectory 2 (N=5)	Trajectory 3 (N=5)	Trajectory 4 (N=4)	Trajectory 5 (N=6)
	Mean (SD) or % (N)	Mean (SD) or % (N)	Mean (SD) or % (N)	Mean (SD) or % (N)	Mean (SD) or % (N)	Mean (SD) or % (N)
Age at Wave 1 (years)	32.57 (11.54)	34.67 (11.87)	26.40 (2.97)	35 (12.19)	30.25 (16.98)	33.83 (13.76)
Number of children	2.17 (2.61)	3.00 (3.32)	1.40 (1.34)	3.40 (3.21)	0.75 (1.5)	1.83 (2.23)
Highest education (30 days before partner's arrest)						
High-school diploma/GED or less	33.33 % (10)	44.44 % (4)	60 % (3)	40 % (2)	25 % (1)	0 % (0)
Some college	33.33 % (10)	33.33 % (3)	20 % (1)	40 % (2)	25 % (1)	50 % (3)
College graduate	33.33 % (10)	22.22 % (2)	20 % (1)	20 % (1)	50 % (2)	50 % (3)
Employment status at Wave 1 (30 days before partner's arrest)						
Full time	23.33 % (7)	0 % (0)	40 % (2)	0 % (0)	25 % (1)	66.67 % (4)
Part time	20.00 % (6)	33.33 % (3)	20 % (1)	20 % (1)	0 % (0)	16.67 % (1)
Not working	56.67 % (17)	66.66 % (6)	40 % (2)	80 % (4)	74 % (3)	16.67 % (1)
Household income (USD) 30 days before partner's arrest	\$2431 (\$1359)	\$1850 (\$1387)	\$2625 (\$1109)	\$1250 (\$791)	\$3083 (\$1443)	\$3650 (\$894)
30 days before Wave 1	\$1907 (\$1371)	\$821 (\$607)	\$1650 (\$548)	\$1900 (\$1782)	\$2625 (\$1436)	\$3350 (\$1025)
Substance misuse (30 days before partner's arrest)						
Binge drinking	37 % (11)	56 % (5)	40 % (2)	20 % (1)	25 % (1)	33 % (2)
Marijuana use	27 % (8)	56 % (5)	0 % (0)	40 % (2)	0 % (0)	17 % (1)
Other illegal drug use	10 % (3)	22 % (2)	0 % (0)	20 % (1)	0 % (0)	0 % (0)
Symptoms of dependence	20 % (6)	33 % (3)	0 % (0)	40 % (2)	0 % (0)	17 % (1)

(continued)

TABLE 1 Continued

Characteristic	Total sample (N=30) ^a	Trajectory 1 (N=9)		Trajectory 2 (N=5)		Trajectory 3 (N=5)		Trajectory 4 (N=4)		Trajectory 5 (N=6)	
	Mean (SD) or % (N)	Mean (SD) or % (N)	% (N)	Mean (SD) or % (N)	% (N)	Mean (SD) or % (N)	% (N)	Mean (SD) or % (N)	% (N)	Mean (SD) or % (N)	% (N)
Relationship with inmate (pre-arrest)											
Relationship duration (years)	4.98 (5.36)	7 (5.77)		6 (3.18)		5.2 (4.49)		2.08 (2.07)		4.03 (8.32)	
Lived with partner	60.00 % (18)	89 % (8)		60 % (3)		100 % (5)		0 % (0)		33.33 % (2)	
Cumulative number of new partners between partner's incarceration and Wave 4	1.45 (2.21)	3.25 (3.24)		1.2 (0.45)		0 (0)		1.25 (0.5)		0.00 (0.00)	

^aOne participant was a “negative case” and thus did not fit into any trajectory, though we do include them in the total

FIG. 1 Conceptual model of the processes through which partner incarceration relates to trajectories of sexual risk among African-American women.

Communication barriers eroded relationships. Phone calls with incarcerated partners were expensive, and this cost prevented many women from speaking with these partners. Some had to choose between meeting basic needs and talking to their partners:

“I been trying to come up with the money [for calls]...selling some of my food stamps sometimes trying to put money on my phone.” (Mariama, Wave 1).

While women could visit partners while they were in jail, most found it too expensive to visit them in prison, given that prisons were typically located far from their homes.

Most relationships ended at Wave 3 or Wave 4. It often took several months of reflection for women to decide to end these relationships; additionally, sentencing took time and many women did not know the length of their partners’ sentences until Waves 3 or 4. Women thus typically initiated new survival relationships while they still considered themselves in relationships with their incarcerated partners. Several felt guilty about these new relationships.

Trajectory 2: Destitution and the Formation of New, Non-Economically Motivated Partnerships

Economic Consequences of Partner Incarceration and New Sexual Relationships Like T1 women, women in Trajectory 2 (T2; N=5) became

destitute as a result of their partners' incarceration: most were evicted from their homes and women who managed to remain in their homes became unable to afford basic necessities within weeks of their partners' incarceration. However, while all T2 women initiated new partnerships, they did not rely on these new partners to survive.

Similar to the subgroup of T1 women who delayed starting new relationships, T2 women moved in with family or received substantial financial support from family almost immediately upon their partner's incarceration. Not only did this support materialize rapidly, it persisted throughout the study period. The breadth of the sources of this support exceeded that found among T1 women, and included members of women's and their incarcerated partners' families of origin and ex-partners who were their children's fathers. The size of this support network may have lifted the burden of assisting these women from any one person's shoulders, thus permitting uninterrupted support over time. In contrast to T1 women who lived with family, T2's family members did not charge them rent, though one participant exchanged childcare for housing.

Additionally, T2 women were more likely than T1 women to have an independent source of income, including full-time jobs (Table 1). While no T2 participant was able to work at a job that fully covered necessities throughout the study period, several were able to find jobs at different points. Other sources of income were unemployment, child support, and Supplemental Security Income (SSI).

Substance misuse patterns among T2 women differed from those of T1 women, and may help explain greater access to jobs and rapid family support (Table 1). Two T2 women did not misuse substances at all and none misused heavily stigmatized drugs (e.g., cocaine); none had symptoms of dependence at baseline. Family support and jobs may have been more readily available to T2 women because they did not use heavily stigmatized drugs and because their substance misuse was less disruptive.

Additionally, three T2 women were raising small children, which might have provided further incentive to family members to provide assistance. While several T1 women had young children, few were caring for them, usually as a result of their substance misuse.

In this context, though all T2 women developed new sexual relationships during the study period, none relied on these relationships to survive. Women instead discussed starting new relationships because they were lonely, wanted to have fun, or missed physical intimacy. One participant discussed why she started a relationship:

“...because well sometimes I be getting bored and I just be wanting somebody to talk to and that's what made me do it.” (Neesha, Wave 1)

Sexual Risk Behaviors On average T2 women had 1.2 (SD=0.45) new partners over the study period, about one third the T1 mean (Table 1). The formation of these new partnerships was, however, a departure from their pre-incarceration life: women had been with their incarcerated partners for an average of 6 years (SD=3.18), and most reported that they had had no other partners during those years.

Condom use with new partners also differed across T1 and T2: while T1 women rarely reported using condoms consistently, three of five T2 women reported always using condoms with new partners. With one exception, T2 women formed only casual partnerships. They discussed several reasons why they sought out casual

relationships. Some felt that they needed time to “do me” after tumultuous experiences with their incarcerated partners prior to or during their imprisonment. One participant explained why she was not seeking a serious relationship:

“...I was always putting time...with [the incarcerated partner] when I should’ve been doing other things so it’s like now...I’m at school—I’m home doing my schoolwork...I’m too busy trying to find a job...[and] make sure I’m OK.”
(Nikah, Wave 2)

Others were still emotionally entangled with their incarcerated partners and were not ready to embark on a new emotionally intimate relationship. Women used condoms with these new partners because they considered the relationships to be casual and because they were concerned about “catching diseases.” The sole T2 woman who had a serious relationship stopped using condoms with her new partner because they fell in love and she wanted to see if she could get pregnant; concerned about STIs, both she and her new partner got tested when they stopped using condoms.

Indirect concurrency was quite common for T2 women: three women reported that their new partners had other partners; this kind of concurrency only happened in casual relationships. T2 women used indirect concurrency strategically: their new partners’ involvement with other women reassured them that these men would not seek to deepen their relationship. Direct concurrency, however, was rare: only one T2 participant had overlapping partners.

Relationships with Incarcerated Partners Most (4/5) T2 women ended their relationships with their incarcerated partners by Wave 4, usually because of concern about the quality of the pre-incarceration relationship. Learning about or coming to terms with these concerns were processes that unfolded over time (e.g., one woman learned about her partner’s non-monogamy after he was incarcerated) and so relationships tended to end at Waves 2 or 3 rather than immediately. As with T1 women, communication difficulties presented other barriers.

Unlike T1 women, who had to initiate partnerships to survive, T2 women were able to time the beginning of new partnerships in the context of their relationships with their incarcerated partners, and most initiated new partnerships as their relationships with these incarcerated partners were ending or after they were over.

Trajectory 3: Destitution and No New Partnerships

Economic Consequences of Partner Incarceration and New Sexual Relationships T3 women (N=5) became destitute as a result of partner incarceration, but initiated no new partnerships during the study period. These women’s post-incarceration economic circumstances most closely resembled those of T2 women: over time, several got jobs or developed other sources of income (e.g., SSI, child support; Table 1*), and several moved in with family. Three did not misuse substances and were raising young children, which may have facilitated family support. The two T3 women who misused substances were still able to meet their basic needs by relying on family and formal supports (including

*As seen in Table 1, T3 women’s household income seems to increase between the month preceding arrest and the month preceding baseline. This may be because some were living with family at the time, and included family members’ incomes in their calculations.

drug treatment) over time. As with T2 women, the availability of these resources seems to have eliminated the need to turn to a new partner to survive.

Relationship with the Incarcerated Partner In contrast to T1 and T2 women, nearly all (4/5) T3 women sustained their relationships with their incarcerated partners through Wave 4. These women believed that they and their partners shared a compatible vision for a post-release life together. One substance-misusing participant, for example, believed that she and her partner would continue their recovery journey together after his release. All had had children with their incarcerated partners, and co-parenting was a vital part of the future they envisioned. Importantly, almost all knew that their partners would be released within months, so they would not have to wait long for these futures to begin. They also either had positive pre-incarceration relationships or believed that they could resolve pre-incarceration troubles.

Additionally, these women kept in close contact with their incarcerated partners during their imprisonment. While the cost and logistics of visiting prisons were often prohibitive, they wrote frequently and, when partners could access a cell phone (which are illegal in correctional facilities but were often available regardless), spoke often. Within the context of these ongoing strong romantic ties with their incarcerated partners and aided by familial and formal supports, T3 women did not seek out new partners, thereby eliminating the risk of HIV/STIs during the study period.

Section 2: Partner Incarceration, Economic Stability, and New Partnerships

With one exception, T4 and T5 women ($N=10$) did not rely economically on their partners before their incarceration. Several ($N=5$) were young adults who were in school and living at home with their parents, who covered all or most of their living expenses. While some T1, T2, and T3 participants were young adults, they were in a qualitatively different developmental stage (e.g., living with a partner instead of with a parent). The four older women in T4–T5 had supported their households entirely on their own through work or SSI before their partners were incarcerated. This lack of economic interdependence occurred in a broader context of minimal overall interdependence: seven had been in relationships with their partners for <1 year, and just two had lived with their partners (Table 1). Only one had a child with her partner.

While three T4–T5 women misused substances, this did not affect their economic status. One of these participants, for example, was able to subsist on her SSI checks, and so did not have to worry about substance misuse impeding family support or employment.

Partner incarceration thus had little effect on women's household incomes (Table 1), and so women in T4 and T5 did not have to rely on new partners to survive. They instead developed new relationships (or decided not to) in the context of their relationships with their incarcerated partners and in response to their own emotional and sexual needs.

Trajectory 4: Economic Stability and the Formation of Non-Economically Motivated Partnerships

Sexual Risk Behaviors On average, T4 women ($N=4$) had 1.25 new partners ($SD=0.5$; Table 1). For younger T4 participants, developing a new sexual relationship over the course of the approximately year-long study period appeared

to be relatively typical of their recent sexual histories, given that they had only been with their incarcerated partners for <1 year.

Most (3/4) T4 participants experienced these partnerships as casual. Reasons for seeking out casual partnerships were similar to those given by T3 women: women wanted time to focus on themselves and were not emotionally ready for a new, serious relationship. Concerned about STIs and pregnancy, women consistently used condoms with these casual partners. The sole T4 woman who had a serious partner stopped using a condom with him a few months into the relationship, but both were tested for STIs before making this change.

Concurrency was rare. Only one participant reported direct concurrency, and this happened when she developed a new casual partnership as a prior casual relationship was ending. Only one participant reported indirect concurrency. In contrast to T3 women who sought out new partners who had other partners, this T4 participant experienced this indirect concurrency as betrayal.

Relationship with Incarcerated Partner All T4 women ended their relationship with their incarcerated partners by Wave 4, primarily because they could not envision a shared, positive future with their incarcerated partner, often because of the length of his sentence, particularly when considered in light of the duration of their (short) pre-incarceration relationship with this partner. Additionally, some women voiced concerns about the quality of their relationships with their incarcerated partner before he was incarcerated (e.g., extensive violence), and communication during the incarceration period was often poor. Similar to T2 women, almost all T4 women initiated new partnerships only as they were ending their relationships with their incarcerated partners or after these relationships were over.

Trajectory 5: No New Partnerships

All T5 women ($N=6$) continued their relationships with their incarcerated partners through W4. As with T3 women who continued relationships with these partners, each T5 woman envisioned a positive, shared future with these partners after their release; these hopes were usually grounded in positive pre-incarceration relationships. Additionally, and similar to women in T3, most incarcerated partners were scheduled to be released within months and so this shared future was imminent. Perhaps because they had the financial means, T5 women reported frequent contact with these partners, through visits, phone calls, and letters. This contact allowed them to sustain their connection with these incarcerated partners.

Section 3: Negative Case

One participant did not fit into any trajectory. Both she and her partner were homeless before he was incarcerated, and there was no evidence in the transcripts that they relied on one another for food, shelter, or other material resources. While her economic situation deteriorated over the study period and she formed relationships with men to get food, there was no evidence that this deterioration was linked to her partner's incarceration; her economic decline was instead linked to the inconsistent support that her social service program provided.

DISCUSSION

Racialized mass incarceration is a potent contemporary manifestation of structural discrimination that appears to help produce racial/ethnic disparities in HIV and

other STIs.^{1-8,11,12,14} The results of this longitudinal qualitative analysis testify to the importance of continuing to strengthen research on partner incarceration and African-American women's HIV/STI risk. Consonant with past research,^{2,20-24} our findings suggest that losing a partner to prison or jail can inaugurate a period of high HIV/STI risk among women. Our analysis also revealed considerable heterogeneity in trajectories of sexual relationships and risk, and identified pathways through which specific consequences of partner incarceration (primarily economic) gave rise to each trajectory.

Economic devastation was one of the most common and life-altering consequences of partner incarceration. Past sociological and criminological research has found that households that have lost a breadwinner to prison experience major financial hardship.^{2,29-34,42} The extent to which partner incarceration created destitution cleaved the sample in two, with T1, T2, and T3 women rapidly becoming homeless or unable to pay for basic necessities, and T4-T5 women experiencing little change in their economic status. Notably, the extent of economic devastation was primarily a function of the developmental stage of the relationship. On average, T1, T2, and T3 women had been with their partners for 6 years before they were incarcerated. During that time, they had built an integrated life with their partners; this integration included depending on their partners to cover household expenses. In contrast, most T4-T5 women had been with their partners for <1 year, and thus had had less opportunity to create a shared life with them and form an interdependent economic unit. Additionally, our analysis suggests that the *participant's* life stage determined the extent to which partner incarceration was economically devastating. T4-T5 women tended to be younger and were more likely to be living with their parents than T1-T3 women; in this life context, there was little need for partners to contribute economically. Whether or not partner incarceration catalyzed economic devastation thus depended on the individual's life stage and the relationship stage, with adult women in longstanding partnerships suffering most acutely.

Consistent with the Social Ecologic Model, this analysis suggests that the availability and timing of family support helped shape the consequences of this economic devastation for T1, T2, and T3 women's sexual relationships and risk. The early absence of family support differentiated T1 women from T2-T3 women and created conditions of substantial and sustained vulnerability to HIV/STIs among T1 women, arguably the participants at highest risk of HIV/STIs. Facing economic devastation without family support, T1 women forged sexual relationships with (often several) new partners who could provide them with housing, food, and other necessities. Consistent with studies of condom use in heterosexual couples in the general population,⁴³ condom use usually declined in these serially monogamous relationships. In contrast, T2 and T3 women were able to rapidly access sustained and extensive family support (often from multiple sources), and this support protected them from having to initiate sexual relationships to survive. Collectively, these findings are consistent with past research that suggests that family support mitigates adverse effects of discrimination,^{e.g.,44} and illustrate the hardships suffered in the absence of this support.

Family support may have been especially vital because of the particular historical period in which partners were incarcerated. Racialized mass incarceration emerged as the social safety net in the US was dismantled: in the 1990s, for example, spending on public housing declined by \$17 billion while spending on prison construction increased by \$19 billion.⁸ Perhaps as a result, participants rarely

discussed seeking or receiving government entitlements despite the economic hardships they faced. The significance of SSI for participants underscores these entitlements' transformative potential: no woman receiving SSI turned to new partners for financial assistance. Family support, however, was no substitute for entitlements: it often drained resources from other economically precarious people, and was inconsistent, meager, and contingent on the quality of women's familial ties.

Perhaps because of the vital role that family support played in mitigating the consequences of economic devastation, substance-misusing women were heavily concentrated in T1. Women who used stigmatized drugs or had symptoms of dependence were estranged from their families before their partners were incarcerated. These family members were thus rarely willing to provide resources to support women in the days and weeks following their partners' incarceration. Substance-misusing participants displayed remarkable resilience: as discussed elsewhere,³⁵ many stopped misusing substances as a part of a broader effort to "get their lives back on track." This shift allowed them to gradually rebuild relationships with family members, some of whom often eventually began providing economic resources. With rare exception,^{28,45} studies have overlooked the specific implications of partner incarceration for substance-misusing women's sexual relationships. Because rates of partner incarceration are likely high among substance-misusing women, expanding this line of inquiry is important from a population-health perspective.

T2, T3, T4, and T5 women either experienced no economic consequences of partner incarceration or these consequences were buffered by family or other supports. As a result, these women could choose to form (or not form) new relationships based on their emotional and sexual needs instead of economic necessity. Women in T2 and T4 chose to start new relationships but did not wish to be emotionally involved with their new partners; they thus formed casual partnerships. To minimize the risk that men would want to develop more intimate relationships, some T2 women sought out men who had other partners. Trajectories of T2 and T4 women (and T1 women) are consistent with past empirical and conceptual work suggesting that residents of geographic areas with high incarceration rates have more partners overall and engage in more concurrency.^{1,5,6}

T3 and T5 participants were at the lowest risk for HIV/STIs: almost all maintained their relationships with their incarcerated partners and did not start new relationships. T3 and T5 women chose to remain with their incarcerated partners for several reasons, but we highlight two that are particularly policy relevant. Almost all T3 and T5 women had partners who had received short sentences, and so participants knew that they would not have to wait long for their partners to return home. In contrast, women in other trajectories discussed the perceived impossibility of maintaining relationships with men who had received multi-year sentences. Efforts are underway to reduce sentence lengths.⁴⁶ Our findings suggest that reduced sentence lengths may create conditions that allow relationships with incarcerated partners to persist, all else being equal, and thus may diminish sexual risk among women with incarcerated partners.

Additionally, T3 and T5 women discussed the importance of frequent communication to sustaining their relationships. The cost and conditions of communication with incarcerated people are often prohibitive,⁴⁷ and participants discussed the economic toll of calling their incarcerated partners. Advocates for prisoners' rights are successfully lobbying to reduce the cost of these calls.⁴⁸ Improved communica-

tion may facilitate the maintenance of relationships between incarcerated men and their partners, and reduce sexual risk among these partners.

Strengths and Limitations

Our findings should be considered in light of the study's limitations. As with qualitative studies generally, our findings may not be generalizable to the broader population of African-American women who have lost a partner to prison or jail. Future quantitative research can explore the relationships identified here in probability-based samples.

We use Maxwell's framework to consider the validity of our findings.⁴⁹ To strengthen the descriptive validity of our findings, we audiotaped interviews and transcribed them verbatim. The study's longitudinal design allowed us to enhance the interpretative validity of our findings: we were able to cross-check interpretations with participants during subsequent interviews. We sought out negative cases to strengthen the theoretical validity of our findings.

The study's longitudinal design (and 100 % retention rate) also strengthened the results' theoretical validity. This design allowed us to learn about the complex processes through which partner incarceration affected women's sexual relationships and risk as these processes unfolded. Additionally, a longitudinal design helped us to develop a more comprehensive understanding of the consequences of partner incarceration. For example, if we had only conducted a single interview shortly after each partner's incarceration, we would not have known that T1 participants who initially crafted a safety net eventually formed survival relationships.

CONCLUSIONS

Recent years have witnessed strong challenges to the strategies that have helped to generate racialized mass incarceration in the US. Some jurisdictions, for example, have amended drug laws themselves,⁵⁰ while others have chosen not to enforce some drug-related laws.⁵¹ Californians recently voted to downgrade many nonviolent property crimes and drug offenses to misdemeanors from felonies, thus setting the stage to free thousands of currently incarcerated men and women.⁵² Additionally, social movements have recently formed to challenge policing strategies that support mass incarceration (e.g., stop and frisk).⁵³ Data from this and other studies suggest that these structural changes may reduce the burden of HIV/AIDS among African-American women, particularly those who misuse substances. Given this evidence, public health practitioners should advocate for these and other legal changes that will bring the era of mass incarceration to a close. These structural changes should be accompanied by efforts to rapidly screen women with recently incarcerated partners for economic, housing, STI/HIV prevention, and drug treatment needs, and quickly link women to needed assistance. Key partners in this work might include public defenders, who develop relationships with defendants' families post-arrest, and Departments of Re-Entry, which are invested in the ongoing stability of inmates' families as a means to reduce recidivism.

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