

IV Drug Use and Sexual Behavioral Intentions after Release from Incarceration: A Comparison of Male and Female Inmates

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Abstract

Samples of male and female prison inmates in the United States were surveyed concerning behaviors known to spread HIV/AIDS. Specifically, their future behavioral intentions were measured with reference to risky activities such as unprotected sex and IV drug use. Future behavioral intentions are compared to levels of self-reported past risky behavior. It was found that both men and women inmates indicated that once they are released they will use condoms, ask their sex partners about their sexual histories, as well as practice safer drug injecting behavior such as cleaning their needles and avoiding needle sharing. Women indicated safer sexual behavioral intentions than did the men. Policy implications include providing inmates with the harm reduction tools necessary to follow through on their intentions to avoid risky behaviors and reduce the spread of HIV once released.

Key Words: AIDS/HIV, prison, behavioral intentions, inmates

1. Introduction

American prisons and jails are inundated with problems. As a result of the deinstitutionalization policies of the past, they have become de facto mental institutions. To further complicate matters, jails and prisons serve as incubators for devastating communicable diseases such as HIV/AIDS. In fact, the single most urgent medical issue in prisons and jails is that of AIDS. Approximately 22,000 prison inmates are HIV positive and 25% of all HIV positive people in the United States will spend time incarcerated (Maruschak, 2009; Hammett, Harmon, and Rhodes, 2002). Furthermore, the vast majority of current inmates will be released back into the community. Over 50,000 inmates are released from custody in the United States every month (Clear, Cole, and Reisig, 2009). Consequently, it is imperative to ascertain inmates' future behavioral intentions with reference to intravenous (IV) drugs and risky sex in order to limit the spread of HIV.

2. Background

Attitudes and actions have a reciprocal relationship, each fueling the other (Myers, 1990). There is clearly a link between what people think they will do in the future and what they actually end up doing. It also is true, of course, that the correlation between what people say they intend to do and what their actual future behaviors are is less than perfect (Myers, 1990). Research on inmates has shown that if inmates are educated concerning AIDS knowledge, convinced that harm reduction measures are effective at reducing infection, and informed that the effects of HIV infection are severe, then positive and safer future behaviors are much more likely (Valdiserri, Hartl, and Chambliss, 1989). Similarly, Klieman, Friedman, Mauge, Goldsmith, Des Jarlais, and Hopkins (1997) and McAuliffe, Doering, Breer, Silverman, Branson, and Williams (1989) found that after having been exposed to AIDS education materials, IV drug addicts had significantly reduced their high risk behavior. Finally, Des Jarlais and Friedman (1987) argue that for positive behavioral intentions to translate into safer injection behavior, the means for risk reduction must be made available to IV drug users (e.g., sterile needles, bleach). With reference to risky sex, research shows that positive behavioral intentions can result in safer behavior (Becker and Joseph, 1988; Mausbach, Semple, Strathdee, and Patterson, 2009). There also appears to be a trend toward primary forms of risk reduction including limiting one's number of sex partners and insisting on condom use during sex (Franzini, Sideman, Dexter, and Elder, 1990).

3. Methods

The survey for this study measured AIDS knowledge as well as behavioral intentions for IV drug use and sex. This information will aid in the identification of subgroups of inmates who exhibit dangerous attitudes regarding future behavior.

If inmates do not indicate a willingness to alter risky behavior, AIDS education programs can be modified to address these groups specifically. As a way of collecting baseline data, inmates were asked to indicate their IV drug use and sexual behaviors before being incarcerated. Thus, this approach represents an approximation of a longitudinal design whereby cross sectional data collected at one point in time can be used to create an estimate of changes over time (Babbie 2010). Two hundred ninety-eight male and 155 female inmates were sampled from three prisons in a northeastern state known to have very high rates of HIV when compared to prisons across the nation. Table 1 summarizes past IV drug use and sexual behavior:

Insert Table 1 about here

Greater proportions of the women indicated past participation in behaviors that increase their risk for HIV infection, especially drug-related behaviors. Seventy-four (25%) of the men and 65 (42%) of the women indicated past IV drug use on the street, while 20 (7%) of the men and 10 (7%) of the women admit to continuing their use in prison. Forty-nine (16%) of the men and 51 (33%) of the women also admitted to having shared injection equipment at some time in their pasts. On the sexual question, women seem to have a history of safer behavior; a higher proportion of the women reported discussing HIV with past partners. This still suggests room for improvement in promoting safer sexual behaviors.

Three questions were included to measure behavioral risk using a continuum from low (zero = never) to high (10 = always). Table 2 suggests that of those inmates who admitted to injecting drugs in the past, men and women reported similar levels of cleaning their needles. Subjects also were asked about frequency of condom use in the past and frequency of questioning sex partners about their sexual histories.

Insert Table 2 about here

Women indicated higher average levels of condom use and of questioning sex partners. Women used condoms and questioned their sex partners more often than the men, but still fairly infrequently. Out of a possible score of 10, women scored a 3.39 for condom use and a 4.97 on discussing the history of their sex partners. Men scored 2.59 and 3.55 respectively; thus women scores indicate safer behavior on both items. However, for both men and women, the scores on both of these items suggest somewhat sporadic condom use and discussions with sex partners. Finally, men and women who had injected drugs indicated a willingness to use bleach to clean their needles but both groups did this only about half the time. These findings serve as baseline data with which to compare future behavioral intentions.

3.1 Behavioral Intentions

Six questions were asked of respondents to assess what their behaviors might be like after they are released from prison. Three items were included pertaining to future drug-related behaviors: 1) use of IV drugs; 2) sharing equipment; and 3) if they thought they would use IV drugs, whether they would use bleach or alcohol to clean their needles. These three items were combined into an index called "IVDU behavioral intentions." The other three items pertaining to future sexual behavior include: 1) condom use; 2) asking partners about their sexual histories; and 3) discussing AIDS with sex partners. These were combined into an index called "sexual behavioral intentions."

The six items were measured on a continuum from low (zero = definitely will) to high (10 = definitely will not). On the drug-related items, lower scores indicated intentions to engage in more risky behaviors. On the sex-related items, lower scores indicated intentions to engage in safer behaviors.

Table 3 details the inmates' responses on these indexes. Women reported that they intended to be safer than men with respect to sexual behaviors. However, they appeared to be about the same as the men with respect to IV drug use intentions.

Insert Table 3 about here

It was possible that the men and women differed on individual items within the indexes, but those differences were masked when looking at the overall index means. To determine whether this happened, two ANOVAS were done on all items within both indexes by sex to determine how the overall mean was formed. For example, it was possible for men and women to have identical means on the IV drug use index (the combination of three variables) while differing only on one dimension of this variable. The resulting ANOVA yielded no significant differences on the three items by sex and when the three were combined, the means were not significantly different.

This reinforces the indexed-based finding that men and women are very similar in terms of their future behavioral intentions regarding IV drug use. For the index of sex-related behaviors, the ANOVA indicated significant differences for all the dimensions of making up this variable. That is, females indicated significantly safer behavior on all separate index items as well as on the grand mean itself. This means that any difference between men and women on the sexual behavioral intentions index cannot be attributed to a large difference on only one of the three index items. In other words, the statistically significant difference between men and women was found because the groups differed on all the items; women clearly intend to be safer in all areas of sex included in the index.

3.2 IV Drug Use Behavioral Intentions Hypothesis Test

The IV drug use behavioral intentions index was formed from three variables. On this index, a high score (nearer 10) reflected a willingness to engage in safer behavior, and a low score (nearer zero) reflected a more risky outlook. As Table 3 illustrates, men and women indicated a similar likelihood of engaging in more risky behaviors upon release. A two-tailed T-test conducted on this index for both gender groups showed no significant difference at the 0.05 level. However, while women indicate relatively safe future behavioral intentions with reference to IV drug use, it is important to note that they have much riskier pasts. As noted above, women were much more likely to have engaged in IV drug use on the street and to have shared works on the street. Therefore, the women may be overly optimistic about what they might do in the future. At any rate, it is very bold to conclude that women will definitely follow through on their behavioral intentions.

3.3 Sexual Behavioral Intentions Hypothesis Test

The sexual behavioral intentions index was formed from three variables designed to assess the future intentions of respondents in terms of their sexual behavior. The index was constructed so that a lower score, or mean, indicated safer intentions, with a higher score indicating more risky intentions. To evaluate the difference between males and females on this index, a T-test was conducted. The T-test indicated a statistically significant difference ($P = .000$) between the mean for the men (3.1) and for the women (1.9). Men indicated intentions to engage in more risky sexual behaviors upon release than did females. However, the proportional reduction in error (PRE) measure used ($\text{ETA square} = 0.04$) suggests that only about 4% of the variation in sexual behavioral intentions could be explained by sex. While the T-test suggests a non-zero difference between men and women, sexually-related behavioral intentions cannot be predicted very accurately from knowing ones' gender (the independent variable) with much efficiency.

The results of this analysis mean that, in general, men and women expressed intentions to engage in safer practices in both areas. Both sexes have means on IV drug use behavioral intentions (8.5 for men and 8.454 women) and sexual behavior intentions (3.12 for men and 1.89 for women) that suggest they at least intend to be safer once released from prison. The only significant differences in the area of sexual behavioral intentions were women intend to be slightly safer than men. The obvious policy implication of this is to provide inmates with the necessary tools and training to follow through on these intentions. This should include HIV prevention kits upon release that include clean needles, bleach, condoms, and dental dams for both groups; in addition, women must be taught how to be more assertive in the area of sexual negotiation (i.e., encouraging condom use for their sex partners). Discharge planning by departments of correction also could help inmates follow through on their intentions.

Inmates must be convinced that they are capable of implementing strategies that will reduce their risk of infection for a behavioral change to take place. Correctional officials must acknowledge the fact that many inmates are from extremely deprived backgrounds and use IV drugs as a means of coping. Therefore, it seems inappropriate for prisons to force inmates into accepting a dichotomy: IV drug use on the outside and complete abstinence on the inside. Harm reduction theory takes the inmate at whatever point they are in their lives and stresses how the individual can become safer, but only in an incremental fashion (Harm Reduction Coalition, 2011). Once standard AIDS information is disseminated showing how the inmate puts him/herself at risk and tools are made available to help the users continue their drug using practice, but with less risk of infection, techniques need to be employed to help the user understand that this approach is effective at HIV prevention. Success stories should be highlighted to the user including peer educators who have been successful at IV drug use reduction (Collica, 2007). Ultimately, this would help at-risk offenders to follow through on positive behavioral intentions after being released from incarceration.

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TABLES

TABLE 1: Sample Comparisons of Frequencies of Self-Reported Drug Use and of Discussing AIDS with Sex Partners

	Males N = 298	Females N = 155
Used IV drugs on the street	25%	42%
Used IV drugs in prison	7%	7%
Shared works on the street	16%	33%
Discussed AIDS with sex partners	63%	70%

% indicates yes responses

Table 2: Comparison of Mean Levels of Cleaning Needles, Using Condoms, and Discussing Sex Partners' Sexual Histories Between Men and Women

Variable	Group	N	Mean
Frequency of using bleach to clean needles	Men	73*	4.9
	Women	65*	4.5
Frequency of condom use during sex	Men	297	2.59
	Women	137	3.39
Discussed history of sex partner	Men	295	3.55
	Women	148	4.97

*N Refers to the number of respondents answering the question:
 This item had a smaller N because many inmates had never used by IV drugs

Table 3: Comparison of Men and Women for IV Drug Use and Sexual Behavioral Intentions

Variable	Group	N	Mean	
IV drug use Behavioral intentions	Men	295	8.5	0 = risky
	Women	148	8.45	10 = safe
(T = -.47, p. = .319, not significant)				
Sexual Behavioral Intentions	Men	295	3.12	0 = safe
	Women	148	1.89	10 = risky

T = 4.19, p = .000* (ETA Square= .04)

* Significant Two-Tailed <.05