Prevention of Human Immunodeficiency Virus (HIV) transmission is increasingly an international priority. Education of high-risk populations, such as incarcerated individuals, is particularly important in thwarting the spread of HIV. To address this concern, the attitudes, beliefs, and knowledge of inmates concerning HIV and AIDS related issues are examined here. An HIV prevention readiness scale, adapted for this study, was administered to 104 undergraduates from a local college and to 33 inmates at a state correctional facility both located in the northeastern United States. Responses to the survey revealed significant differences between these two groups. A majority of inmates' surveys indicated some ignorance regarding the modes of HIV transmission, although these responses may reflect prisoners' fear and hypersensitivity to the disease. Close living conditions and secretive homosexual activity may increase these fears. The undergraduate sample reported less concern over HIV and were less interested in obtaining further knowledge about HIV, when compared to the prison subjects. This difference may be due to the gap in the socioeconomic status between the two groups and to the lesser likelihood that students knew someone who was HIV positive. Inmates were less afraid to disclose seropositive status than were students, and prisoners reported less likelihood of treating labeled individuals differently. Results indicate that up-to-date HIV education programs are essential for inmates. (RJM)
HIV Prevention Readiness in Undergraduates and Inmates

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1997

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Abstract

Prevention of HIV transmission is increasingly an international priority. Education of high risk populations, such as currently incarcerated individuals, is important for effective prevention. This study was based on a previous work which examined the attitudes, beliefs, and knowledge of inmates concerning HIV and AIDS related issues. In the present study, the qualitative findings from Antonio, Shovlin, Barber, and Chambliss (1997) were translated into a 24 question self-report measure presented in a Likert Scale Format. This was done in order to obtain quantitative normative data on the issues made salient by the qualitative study results. The HIV Prevention Readiness Scale was administered to 104 Introductory Psychology undergraduates and 33 inmates, responses revealed significant differences between undergraduates and inmates. This normative data may be used in the development of more precise education reform within the prison.
Introduction

Prevention of HIV transmission is increasingly being recognized as an international priority. Education of high risk populations, such as currently incarcerated individuals, is important for the effective prevention efforts needed to contain this epidemic. Collins (1996) estimates that approximately 22 million people in the world are currently infected with the human immunodeficiency virus (HIV), which causes AIDS. According to the Centers for Disease control and Prevention (1995), 295,473 (62%) of the 476,899 individuals who have been diagnosed with AIDS in the United State from January 1, 1980 through June 30, 1995 have died due to complications caused by this disease.

The occurrence and spread of HIV and AIDS are not only causing difficulties for the general population, but have become matters of great concern in many correctional facilities. In a 1991 survey, 2.3% of State prison inmates were tested positive for HIV, while in Federal prisons 1.0% of the inmates reported having HIV. In both the State and Federal prisons, 9.6% of the HIV-positive inmates showed symptoms of AIDS. Furthermore, it has been found that HIV seroprevalence in correctional settings exceeds prevalence rates in the general population by as much as 6 to 1 (Martin, Zimmerman, & Long, 1993).

First reported in prison inmates in 1983, HIV infection has been a major public health concern in prisons since 1985. A variety of factors contribute to the increased risk of contracting HIV among inmates. Prison populations contain large
numbers of individuals who engage in male homosexual activity and intravenous drug use, before, during, and after incarceration (Monnig & Johnson, 1991).

Determining the prevalence of homosexual activity within a prison system is often an extremely difficult task. First, any type of sexual activity is forbidden within the prison system (Hammett, et al, 1995). Admitting that one has taken part in such a behavior would provoke immediate disciplinary action. Consequently, inmates are unlikely to disclose much information. Second, there is a certain amount of risk associated with revealing one's homosexuality. Fears of discrimination, segregation, and physical abuse cause many prison inmates who are homosexual to keep their identities hidden. Finally, some inmates who secretly engage in homosexual acts are not primarily homosexual, or at least, do not consider themselves homosexual. These individuals, especially those in same sex institutions, have justified their prison-specific behavior by viewing it as their only available sexual option (Hammett, et al, 1995).

Homosexual activity within the inmate population provides one mechanism whereby HIV infection can be spread throughout a heterosexual population, despite its initial concentration within the homosexual community. Male inmates who contract the virus through homosexual practices while incarcerated, may engage in unprotected sex with women upon their release, thereby infecting these women. If these women have unprotected sexual relations with other men, the virus can spread throughout a predominantly
heterosexual community in a relatively short period of time.

Another common high-risk behavior among incarcerated males and females is injection drug use. Intravenous (IV) drug use is a risk factor in approximately 27-28% of all AIDS cases (Monnig & Johnson, 1991). As much as 70% of the incarcerated population has a history of IV use (Valdiserri, Hartl, and Chambliss, 1988), and it was estimated that the percentage of drug offenders incarcerated in the federal prisons would increase from the estimated 47% in 1993 to 70% in 1995 (National Commission on AIDS, 1991).

In a survey done by Martin, et al, (1993), it was found that as the number of incarcerated individuals with drug histories increases as a result of drug control initiatives, the population of HIV-infected inmates will also significantly increase. Dramatic increases such as these will pose great problems in the future. Many are concerned about releasing these increasing number of infected individuals back into the community (Vlahov, 1990). However, most obvious is the problem of more HIV-related illnesses and deaths in correctional settings.

Correctional facilities provide a unique opportunity to confine the spread of HIV. Many believe that our best hope for stemming the spread of HIV is prevention, and that the best strategy is education. The implementation of a variety of education programs in correctional settings may help reduce the spread of HIV among prisoners. Inmates are literally a "captive audience" (Epstein, Hammett, and Harold, 1994); they are more
accessible to educators than individuals in the outside community. Since prisons house a large number of high-risk individuals, it appears to be an optimal place to provide education and prevention programs. Since most inmates eventually return to the outside community, increasingly effective prison HIV education programs not only benefit prisoners, but the public as well (Hammett, 1989).

In addition to increasing knowledge about HIV transmission, prison-based AIDS education programs also provide other benefits. Such programs can reduce unwarranted fears about transmission, teach tolerance of those already infected with the virus, and build support for infected individuals (Martin, et al, 1993). Education programs can also improve working and living environments for both the inmates and staff, while helping to reduce managerial and administrative problems associated with HIV in correctional facilities.

The impact of educational programs within prison settings may greatly affect the broader public health. By reducing the population of infected persons in the prisons or by stopping the spread of AIDS in the 'bridge' group of intravenous drug users, we can reduce the pool of potential HIV transmitters, and therefore reduce transmission of HIV in communities (Martin, et al, 1993).

Education and other efforts to change or reduce high risk behavior are the only way to prevent the spread of HIV in the absence of a cure. HIV and AIDS education programs primarily
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pursue two goals. First, to provide basic knowledge about high-risk behaviors, and secondly, to teach a variety of different ways in which to reduce the risk of contracting HIV. These goals are important to the general population, but are of particular concern to incarcerated individuals (Monnig & Johnson, 1991). As cited in Epstein, et al, (1994), information and traditional educational sessions alone are not enough to motivate individuals to make and maintain changes in high risk behaviors (Kelly & Murphy, 1992). Individual counseling, support groups, expanded drug treatment opportunities, and peer education programs are other important elements of a comprehensive HIV prevention strategy for correctional facilities (Kelly & Murphy, 1992).

Peer education is a special form of collaborative learning which assumes knowledge represents a consensus about information shared by a community of knowledgeable peers. This can be facilitated by talking together in order to reach an agreement (Bruffee, 1993). Peer education differs from traditional teaching methods that rely on "experts" to convey information to students, in that students work together in order to communicate information to the group. As the students work together, they learn to trust their peers, which leads to more confidence in trusting the larger community.

Prison populations are often hard for experts to reach, because they often mistrust authority. It has been suggested that inmates are the best qualified individuals to educate and communicate to other inmates about HIV and AIDS, because many of
them have first-hand knowledge of the risky behavior of their fellow prisoners (Walker, 1993). The mistrust of information provided to the inmates by the administration, has been a recurrent theme in statements from prisoners (Epstein, et al, 1994). Response to the National Prison Project from inmates indicates that they do not trust the information they receive from correctional staff (Greenspan, 1991). A prisoner on work release from Delaware stated that prison peer educators are more effective because they speak the same language. They are more aware of the types of risky behaviors that take place inside the prison. The relationship between the peer educators and the prison population is critical for an optimally effective HIV/AIDS education program (Greenspan, 1991).

The present study extended previous work examining the attitudes, beliefs, and knowledge of inmates concerning HIV and AIDS related issues (Antonio, et al, 1997). This study used focus group methods to solicit information about inmates' knowledge, concerns, and actions related to HIV transmission. The findings suggested that inmates have high levels of motivation to participate in additional HIV training programs, although designing such educational programs is complicated by the pervasive mistrust of prison authorities that exists among the inmates.

Responses indicated an unexpected mixture of sanguine acceptance and phobic hypersensitivity toward HIV among many inmates. While several inmates admitted they were uncertain
whether they would succeed in maintaining all appropriate preventive behaviors after release from prison, and at times voiced attitudes of fatalistic resignation, there was also evidence of unwarranted fear of living in close quarters with HIV carriers (e.g., fear of sharing bathroom facilities). Juxtaposed with unrealistic fears of transmission arising from casual contact, was apparent oblivion regarding the actual risks associated with such practices as tattooing and body piercing. This implies a need for ongoing clarification of the actual modes of HIV transmission, and accurate education about potential high-risk and minimal-risk behaviors.

Before policy is influenced by such findings, however, additional corroboration is desirable. While the focus group method used by Antonio, et al., (1997) provides a useful tool for eliciting open-ended discussion about target questions, the intimate interpersonal context of these small groups may have biased the responses elicited from the inmates. Although confidentiality was assured, the audience of other inmates may have limited the participants' level of self-disclosure in the Antonio, et al, study.

In order to reduce such distortion, in the present study, the qualitative findings from Antonio, et al, (1997) were translated into an objective, 24 item self-report measure presented in a Likert Scale format (the HIV Prevention Readiness Scale). This measure was administered anonymously to a group of volunteer inmates, in order to obtain quantitative normative data
on the issues made salient by the earlier qualitative study on inmates. For comparison purposes, the HIV Prevention Readiness Scale was also administered to a sample of college undergraduates, to explore possible differences between the two populations. This normative data was sought in order to facilitate development of more responsive HIV education programming within the prison.
Methods

Participants:
The sample for this study (N=137) consisted of 33 inmates at a state correctional facility and 104 undergraduate students from a local college, both institutions were located in the northeastern United States.

Apparatus:
A 24 question Likert scale survey was designed to measure inmates' knowledge, beliefs, attitudes, behaviors, and experiences regarding HIV-related issues. Responses to this paper and pencil self-report test were recorded and analyzed.

Procedure:
Inmates in this study were chosen from individuals waiting to participate in discussion groups or other treatment sessions offered within the prison, while student participants were chosen from those individuals attending a Introductory Psychology class. Before inmates and students became involved in the study, the purpose of the study was explained. Each individual was required to sign a consent form indicating their voluntary participation in the research. After this, the scale was administered to consenting participants and the results were analyzed. In order to evaluate the inmates' level of knowledge concerning HIV and AIDS issues, the same scale was given to the college undergraduate students.
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Results

The results indicated that the majority of inmates (69.7%) agreed that if given the chance, they would participate in a needle exchange program. Only 17.5% reported that they would give in to the temptation to get high rather than take precautionary measures. The majority (67.2%) of inmates surveyed also said that HIV was the disease they feared most. Nearly all inmates (95.6%) stated that injection drug use would put them at risk for contracting HIV. Roughly two-thirds (67.9%) of the prisoners said that they would not shave with someone else's razor. The majority of inmates were also aware that body piercing is a viable means of contracting HIV (78.1%). A large majority of the inmates also indicated that they were aware that getting a tattoo could put them at risk of contracting HIV (74%). Nearly half (45.5%) on the incarcerated males in the survey felt that it was unsafe to share the same sink or toilet with someone who has AIDS. Roughly 40% believed that they could contract HIV through shared eating utensils and (54.5%) did not want to participate in contact sports with an individual who was HIV positive.
Discussion

The majority of inmates agreed that they would participate in a needle exchange program if offered the chance. Given the fact that only 60% of this population are known to be intravenous drug users, this finding is encouraging. A low percentage of the inmates indicated they would give into the temptation to get high rather than take precautionary measures. This finding raises questions about the Antonio, et al, (1997) results. During face to face contacts, inmates may have responded histrionically and exaggerated their vulnerability to temptation. On the other hand, social desirability responding may have distorted the self report data, resulting in an underestimate of their risk. The finding that over half of the inmates sampled indicated that they felt that homosexuals are at a higher risk of contracting HIV than heterosexuals is surprising. This finding may suggest that the inmates sampled are not well informed or lacking in education on the history of HIV issues for originally this virus was referred to as the "gay disease". On the other hand, the inmates may in fact be aware that homosexuals do have a higher rate of HIV infection.

Roughly two-thirds of the inmates said that they would not shave with someone else's razor. The majority of inmates sampled also were aware that one could contract HIV through body piercing and that getting a tattoo could put them at risk of contracting HIV.

Nearly half of the inmates felt it was unsafe to share the
same sink or toilet with someone who has AIDS. A majority of inmates indicated that they believed they could contract HIV through shared eating utensils, and did not want to participate in contact sports with individuals who are HIV positive. These results may be indicative of some amount of ignorance regarding the modes of HIV transmission. However, this could also show that inmates show greater hypersensitivity to the possibility of contracting the disease.

The inmates may not be entirely sure about the ways HIV can be transmitted from one person to another. Perhaps the prisoners know cognitively that it is not possible to contract HIV through sharing the same sink with someone who has AIDS, but they still may avoid these behaviors just “to be on the safe side.” The prisoners are very much aware that HIV can be contracted through the exchange of blood. However, they are somewhat naive when it comes to information about the transmission of HIV through other fluids. More accurate information about the actual risks of transmission would help inmates make more informed and reasonable behavioral choices, and might reduce intolerance of HIV-positive peers.

Consistent with the Antonio, et al, results (1997) the majority of inmates indicated that they fear HIV infection the most out of any other disease. Since inmates are forced to live in very close quarters, they may fear HIV most because they do not feel like they can control it. Such living conditions may foster their fear in that they may be more likely to know someone
who is infected with the disease or has died as a result of complication due to AIDS.

The undergraduate sample reported less of a fear of HIV and were less interested in obtaining further knowledge about HIV. This may be due to the difference in socioeconomic status (SES) of the two groups. Most of the college students in this study were from middle class families and therefore may be less likely to have been familiar with someone who was infected with HIV. Inmates were less afraid to disclose seropositive status than students, and reported less likelihood of treating labeled individuals differently. These results may also indicate inmates have more first-hand knowledge of individuals with HIV and as a result are less likely to discriminate against them but rather be more accepting of the virus.

Effective, up-to-date HIV education programs are essential for the inmate population. Inmates need to remain aware of behaviors that increase their risk of infection. In addition to being informed about the possible ways of becoming infected, they need current information about available treatments and ways to deal with the disease after diagnosis. Peer education programs may provide an efficient mechanism for providing this knowledge to inmates.
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</tr>
<tr>
<td>Corporate Source:</td>
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