

2007

Barriers to Condom Use and HIV Infection in Latino Youth

Jacqueline M. Leung-Heras
University of Iowa

Follow this and additional works at: <https://scholarworks.uni.edu/ijghhd>



Part of the [Public Health Commons](#)

Let us know how access to this document benefits you

Copyright ©2007 International Journal of Global Health and Health Disparities

Recommended Citation

Leung-Heras, Jacqueline M. (2007) "Barriers to Condom Use and HIV Infection in Latino Youth," *International Journal of Global Health and Health Disparities*, 5(1), 105-114.

Available at: <https://scholarworks.uni.edu/ijghhd/vol5/iss1/11>

This Research is brought to you for free and open access by the COE Journals at UNI ScholarWorks. It has been accepted for inclusion in International Journal of Global Health and Health Disparities by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Offensive Materials Statement: Materials located in UNI ScholarWorks come from a broad range of sources and time periods. Some of these materials may contain offensive stereotypes, ideas, visuals, or language.

BARRIERS TO CONDOM USE AND HIV INFECTION IN LATINO YOUTH

Jacqueline M. Leung-Heras, MS candidate

Department of Community and Behavioral Health, College of Public Health
The University of Iowa
Iowa City, Iowa

Author correspondence to:
jacqueline-leung@uiowa.edu

INTRODUCTION

BACKGROUND OF THE DISEASE

Acquired Immunodeficiency Syndrome (AIDS) was first reported in the United States in 1981 and has since become a worldwide epidemic.¹ AIDS is caused by Human Immunodeficiency Virus (HIV). By killing or damaging the cells of the body's immune system, HIV progressively destroys the body's ability to fight infections and certain cancers. HIV destroys CD4+ T "helper" cells, which are crucial to the normal function of the human immune system. After a certain number of CD4+ T cells in HIV-infected individuals are destroyed, AIDS develops.^{1,2}

Individuals diagnosed with AIDS have an increased incidence of life-threatening diseases called opportunistic infections which are caused by viruses or bacteria that are typically not life-threatening to those without AIDS. HIV can be spread by unprotected sexual contact with an infected individual, by sharing needles and/or syringes (primarily for drug injection) with someone who is infected, from a mother to her child from her breast milk, and less commonly, through transfusion of infected blood or blood-clotting factors.^{1,2}

At the end of 2003, an estimated 1,039,000 to 1,185,000 persons in the United States were living with HIV/AIDS, with 24-27% undiagnosed and unaware of their HIV infection.² In the United States alone, youth between the ages of 13-24 years old accounted for 36,299 of the total AIDS cases compared to 31,293 AIDS cases in 2001. Among youth ages 13 to 19, 57 percent of reported HIV infections occurred among young women and 43 percent among young men; 66 percent among non-Hispanic, black youth; 24 percent among non-Hispanic white teens; and eight percent among Latino teens. Asian and Native American teens together accounted for less than .009 percent of reported cases in this age group.⁹

BACKGROUND OF THE PROBLEM

Most alarmingly, Latino youth, who make up 15% of the U.S. national teenage population, accounted for 21% of the cumulative AIDS cases.⁵ In 2002, Latino males accounted for 288 of the new AIDS cases while Latina youth accounted for 128 new cases.^{2,7} Findings have shown heterosexual contact to be the major mode of HIV transmission among Latino adolescents.⁵ Although the use of latex condoms have been shown to be an effective barrier to HIV transmission, data from the national Youth Behavioral Risk Surveillance System have consistently documented lower condom use by Latino adolescents than by African American or White adolescents.^{3,7,9}

SIGNIFICANCE OF THE PROBLEM

Although Latinos make up only about 14% of the population of the United States, including Puerto Rico, they accounted for 18% (almost 164,000) of the more than 886,500 AIDS cases diagnosed since the beginning of the epidemic.² Of the rate of AIDS diagnoses for all racial and ethnic groups, the second highest was the rate for Latinos.

Despite the potential consequences of having unprotected sexual intercourse, many Latino adolescents do not use condoms at first intercourse or use condoms on a regular basis.^{3,4} Several factors influence condom use among Latinos. Adolescents who initiate sex at later ages and those who report more than one sexual partner are more likely to use condoms on a regular basis.⁴ Females were as likely as males to engage in sexual practices during the last three months and were likely to have unprotected sex than their male counterparts.^{4,5}

STATEMENT OF THE PROBLEM

There is an alarming amount of evidence that Latino adolescents are at increased risk for HIV infection. The purpose of this study is to review the literature on the epidemiologic relationship between barriers to condom use and HIV infection in Latino youth.

REVIEW OF STUDIES

The literature review is broken down into three major categories: (1) sexual behavior in (Latino) youth, (2) condom use, and (3) risk reduction strategies.

SEXUAL BEHAVIOR AMONG (LATINO) YOUTH

BACKGROUND AND NOTES:

Previous studies in Mexican youth found male gender, higher socioeconomic level, and knowledge of HIV/AIDS associated with condom use, inclusion and separate analysis of these factors are important in a study focusing on this population. Given that interventions should be based on empirical findings (to render them more effective and to permit evaluation of that effectiveness), research is needed on the elements these interventions will aim to modify. A school-based study by Tapia-Aguirre, et al., (2004) explored associations between Mexican young people's condom use, other sexual behaviors, and HIV/AIDS knowledge. This was a cross-sectional, school-based study among

adolescents and young people who attended public schools in the central Mexican state of Morelos during the 1998-1999 academic school year. The sample was representative of schools at the state level, including urban, suburban, and rural areas. The sample framework was made up of 367 public schools. The total sample was 13,293 students (7,468 young women and 5,825 young men) from 11 to 24 years of age.

The cross-sectional study design did not permit evaluation of cause-and-effect association because exposure and event were measured at the same time. Also, the study population included only students from public schools and did not consider private institutions or youth not in school, so that results can only be generalized to this population. Similarly, because data were self-reported by students the results could be an underestimation of sexual behavior and other characteristics of adolescents and young people studied.

Young men with high levels of knowledge with regard to HIV/AIDS transmission were more likely to report using a condom (than to not use any contraception) during their most recent sexual encounter. In addition, male adolescents with high levels of HIV/AIDS knowledge were more likely to use another form of contraception—rather than a condom—during their first sexual intercourse, although condom use was more likely during sexual initiation than using no contraceptive at all. Young women with high levels of knowledge concerning HIV were less likely to have used condoms in their most recent sexual encounter (and more likely not to use any contraceptive method). The same tendency was observed for repeated condom use.

In addition, condom use was associated with male gender. Studies carried out in Mexico have repeatedly found that fewer young women than young men report condom use and that more young women than men feel they do not know how to use condoms. An explanation for this tendency is that gender norms in Mexico and other developing countries make it socially unacceptable for young women to buy or propose use of condoms even if they know they need to use them to protect themselves, but these same norms permit young men to purchase and discuss condoms.

This article brought up interesting and hard-pressed points when dealing with Latino populations. Unprotected sexual activity among Latino youth has been increasing. It is interesting to note that while female adolescents had about the same amount of HIV knowledge as their male counterparts, females were less likely to use condoms and to bring up the issue of using condoms. This indicates that interventions need to probably occur on the cultural level to properly address unprotected sexual activity.

A study by Warren, et al, (1995) sought to address the following questions: What were the trends in sexual behavior among U.S. high school students during the early 1990s? How does sexual behavior vary by race and ethnicity, and how have these differences changed over time? The study also examines how sexual behavior varies by gender and how these differences changed over time whether they had had sexual intercourse during the three months prior to the survey (current sexual activity) and how many sexual partners they had had during their lifetime. This was a cross-sectional study using the Youth Risk Behavioral Survey (YRBS). The sample size consisted of a three stage cluster samples in grades 9-12 at public and private high schools in the 50 states and the District of Columbia. Schools with high percentages of black and Hispanic students

International Journal of Global Health and Health Disparities, Vol 5, No 9 (2007), Article 1991, 16,256 in 1993, and 10,904 in 1995. School response rates were 74, 75, 78, and 70% respectively. This was a large study, transcending across populations, which indicates good control of biases due to sample size.

The results indicated that the rate of condom use at last intercourse was higher. Among Hispanics, males were significantly more likely than females to be sexually experienced, to have had four or more sexual partners, and to have used condoms at last sexual intercourse. The researchers attempted to focus on describing differences by gender, race, and ethnicity. However, the underlying causes for subgroup differences (e.g. education levels, social and economic levels, and cultural influences) could not be addressed in the analysis.

The study was not well done for several reasons. First, combining public and private schools from all states and the DC area does not, as the researchers mention, take into consideration issues of socioeconomic factors and education levels. Secondly, cultural influences and language ability may have also affected the study. If the study were smaller and centralized in a specific area or at least broken down into further categories, the study results would be strengthened.

CONDOM USE

In light of the widespread use of oral contraceptives and long-acting hormonal agents and the possibility that they increase susceptibility to HIV, the goal of a study by Roye (1998) was to ascertain whether teens that use these agents are less likely to use a condom during intercourse. This was a cross-sectional study. The sample consisted of (n = 578) Hispanic and African-American female adolescents between ages 12-21 who came to a reproductive health care clinic in Northern Manhattan. A paper-and-pencil questionnaire which addressed sexual behaviors, sexual history, and communication about sexuality was distributed to adolescent girls attending the clinic from January-July 1996. Seventy-nine percent were Hispanic, 16% were African-American, 1% was white, and the remaining 4% were "other." The demographic breakdown of this group was similar to the larger group; 80% were Hispanic and 15% were African-American. The teens came from an extremely impoverished neighborhood surrounding Northern Manhattan.

The data were limited because they were generated by self-report questionnaire, which is subject to recall and other bias. To minimize this limitation, however, condom use was measured in the last 4 weeks. In addition, the results of this study are generalizable only to inner-city Hispanic and African-American youth. The researchers suggested that a prospective study assessing condom use before and after beginning hormonal contraceptive use is needed to more fully evaluate the relationship between use of hormonal contraception and condoms. As noted, the subjects who used injectable agents were significantly more likely to have been pregnant.

The results looked at sexual behavior, communication, condom use, and ethnicity, while controlling for age. Adolescents who used oral contraceptives or long-acting agents (i.e., Depo-Provera or Norplant) were less likely to have used a condom in the last 4 weeks than teens whose only method of birth control was condoms. Only those

teens that had previously been diagnosed with a sexually transmitted disease (STD) were more likely to have used a condom. Overall, condom use by teens in this sample was low, with only 19% reporting that they “always” use a condom, and 47% of the teens who had been sexually active in the last 4 weeks reporting that they had not used a condom at least once during that time.

This study evaluated the epidemiologic relationship in an effective manner. However, given its limitations, the generalizability of the conclusions begs the question of whether the data is substantial. The study results only apply to inner-city African American and Latino youth. The questionnaire produced limited data. The researchers also assume that when the participants are older, they would be more likely to talk about sex. In addition, the researchers conclude that the physician must provide appropriate counseling to mitigate against the potential to increase the risk of STDs (ensure the message that using birth control does not mean protection from STD/HIV infection).

There is evidence to suggest that among Spanish-speaking youth, the subgroup engages in both risk and protective behaviors that may be different from the behaviors of English-dominant Latino youth. This group is important to consider because (1) the Spanish-speaking Latino population is a significant segment of the U.S., (2) language use is an important proxy for a number of contextual variables such as acculturation, cultural values, access to health and preventive care, and stressors that may affect language/behavior. In a study by Villarruel, et al., (2004), the authors examined theoretical predictors (attitude, subjective norm, behavioral beliefs, normative beliefs, control beliefs) of sexual intercourse and condom use with a sample of Spanish-dominant Latino youth.

Data used in this study were from a randomized control trial designed to reduce the risk of sexually transmitted HIV among Latino youth. The sample size consisted of 141 Spanish-speaking Latino adolescents (77 girls, 64 boys). The majority of participants were Puerto Rican (79%), with a smaller number from the Dominican Republic. Most participants (81%) were born outside the U.S, and 65% reported living in the U.S. zero to five years. The students were recruited from high schools and community-based organization within North Philadelphia.

The study consisted Latino youth primarily of Puerto Rican descent. The results may not be generalizable to other Latino groups. In addition, it would be important to determine whether the theoretical indicators that were identified as predictors of intentions and past behavior are similar to or different from those that predict actual behavior. It was also a small sample size and relied heavily on self-reported data.

As compared to the 1999 Youth Risk Behavior Survey, the Latino youth in this study were less likely to report they had ever engaged in sexual intercourse, and had used a condom at their last sexual intercourse experience (16.7% versus 58%). Results support the theoretical constructs of the theory of planned behavior; specifically that attitudes, perceived partner approval, self-pride, and parental pride on intentions to engage in sexual intercourse are predictive of behavioral intentions. In relation to condom use, regression analyses showed that attitudes, subjective norms, behavioral beliefs, and self-efficacy were significant predictors of intentions to use condoms. Youth who had a positive attitude towards condom use, who perceived that significant others in their

condoms even when sexually aroused reported stronger intentions to use condoms.

This study has several flaws. First, the title is deceptive. "Latino youth" indicates encompassing Latinos from different backgrounds. Instead, this study was predominantly of Puerto Rican/Dominican Republic descent. In addition, previous studies on Puerto Ricans have shown that they most often test higher with HIV knowledge and condom use, possibly inflating the data results.

Data in a study by Martinez-Donate, et al., (2004) were baseline data within the framework of a larger intervention scale. Gender differences in condom use have been associated with differential self-efficacy levels among boys and girls regarding their ability to use condoms. The purpose of this study was to examine gender-related differences in condom use and related attitudes and perceptions among an understudied population of Mexican adolescents in the border of Tijuana, Mexico. This was a quasi-experimental study. The sample consisted of (N=370) students in 10th and 11th grades recruited from four Tijuana high schools. The study included 238 females (64%) and 132 males (36%), aged 14-25 years residing in 160 Tijuana colonias. The data was collected from April 2001-May 2002. A baseline interview was followed by a survey. The data was used to test the effectiveness of an HIV prevention workshop.

The researchers controlled for age. The study was heavily female. The researchers did not measure cultural norms to analyze the extent that Latino youth adhere to norms/association between variables/condom use limited. The researchers also questioned other studies that suggest that females are not interested in sex. There was, however, a large amount of female participants in this study. The limited representation of sample cannot be generalized to the overall population of Tijuana high school students.

Thirty two percent and 20% of students reported lifetime and last three months sexual practices. After controlling for age, the results indicated that males more likely to be sexually experienced or to have had vaginal sex than females. About 55% of those who reported having had vaginal/anal sex during the last three months reported inconsistent/no condom use when having sex during this period. Females were as likely as males to engage in sexual practices during the last three months and were likely to have unprotected sex than male adolescents. Females also tended to have older sexual partners (~three years). Most interestingly, the results suggest that females were more likely to be anxious about using condoms. Females engaged in more risk behaviors despite having strong intentions and holding more positive attitudes towards safe sex.

It was found that Latino women are economically, socially, and culturally subordinate to their sexual partners.

This was a well thought out study. The researchers took into consideration how unequal number of females/males may have limited the results of the study. In addition, the results produced similar results to other findings that females were less likely to use condoms than males.

A study by Gurman, et al., (2004) provides implications for improving sexual health interventions for Latino college students. Interventions need to be tailored to individuals (e.g. gender, sex behavior), and include discussing the use of latex dams and condoms between both sexes. Information on sexual behavior is not enough to influ-

ence condom use. All types of sexual behavior (oral, vaginal, and anal sex) need to be addressed equally. The research question was to analyze predictors for condom use. This is a cross-sectional study. Data was collected in 2002. The sample size consisted of ($n = 1,821$) undergraduate students self-identified as “Hispanic” or “Latino” (1008 female, 590 male, and 143 unreported genders).

The sample population was from across the country and one of the first to include the types of sex (e.g. vaginal, oral, or anal sex). The problem is that the study did not include school/regional information. It does not address health behavior constructs such as perceived risk and benefits, self-efficacy, self-esteem, and partner characteristics.

The results contributed to the field of knowledge about current characteristics and behaviors of Latino university students. The study found key behavioral differences between men and women. The results found that a greater number of men were having oral/vaginal sex and more had had anal sex. These findings suggest that to improve sexual health interventions among Latinos, it may be necessary to tailor the services to specific individuals, according to gender and sexual behavior (not just “vaginal sex”).

This was a well-done study. This study was exploratory in nature and provided information and suggestions to improve future interventions. The study provided only a snapshot of behavioral patterns and factors that influence behaviors. A longitudinal study would provide more detail and insight. The study is not generalizable because campuses were self-selected, self-reported data. In addition, the article does not consider acculturation levels, an important component when offering any type of intervention.

A study by Sneed, et al., (2001) suggested that adolescents who initiate sex at later ages and who report more than one sexual partner were more likely to use condoms on a regular basis. The study examined the specific reasons Latinos did or did not use condoms at first intercourse and their specific reasons for their perceived risk/not perceived risk for contracting HIV.

This was a cross-sectional. The sample consisted of adolescents between the ages of 11-19, recruited from two public health clinics in Los Angeles County ($n=794$, 48.6% male). Only Latinos (78% $n=618$) were considered for analysis. 61% of the sessions were conducted in Spanish.

The study did not examine specific reasons why so many adolescents marked “Don’t know why” they did not use condoms at first intercourse. Future studies should include questions to assess what is meant by “don’t know why.” It is possible that a difference of results might be obtained if data is drawn from a high school setting and not a public health clinic.

The results showed that 25% of participants reported engagement in sexual intercourse, with males reporting a higher rate of sexual activity than females. Males reported a greater number of sexual activities than females. Overall, 46% of the participants reported condom use at first intercourse. The highest reasons for males not using condoms was “lack of availability.” The highest reason for females was “Other/Don’t Know.” Overall, the highest reason for condom use was tied between “Don’t Know” and “Not Available.” This may be potentially due to the lack of communication skills between adolescent and their partner. It appeared that first intercourse was the end result of psychosexual behaviors where heavy petting occurred before first intercourse.

most participants were referred to clinics initially for TB/positive diagnosis for non-active TB case (for school-related purposes). It is possible coercion might have been involved (the participants may have felt participation was also a requirement for entrance into school). There is no real way to inference data in public health setting to actual academic setting.

RISK REDUCTION STRATEGIES

Participants in a study by Jemmott, et al., (2005) volunteered for the “Women’s Health Project;” designed to reduce the chances that African American/Latino adolescent girls would develop health programs such as cardiovascular disease, cancer, and AIDS. The research question tested the effects of a HIV/STD risk reduction intervention on unprotected sexual intercourse and the rate of STD between African American and Latino patients. This was a randomized control trial. The participants were (n = 692) sexually experienced African Americans (n = 463) and Latino (n = 219; 92.7% Puerto Rican) adolescent girls between 12 to 19 years of age (mean age of 15.5 years). The participants were family planning patients at the adolescent medicine clinic in a children’s hospital serving a low-income, inner-city community in Philadelphia.

Unfortunately, the findings were through self-reported measures. It is uncertain whether the results would be similar with adolescent boys of the same ethnicity or with Latinos of other backgrounds. It is possible participants in the HIV intervention compared to controls were likely to return for STD testing because they felt more ashamed of having unprotected sexual activity despite receiving the intervention.

The results suggest that behavioral interventions that focus on skills training may be helpful to reduce unprotected intercourse and STD rates among adolescent girls. Skills intervention also reduced the number of self-report of multiple sex partners at the 12-month follow-up. The findings also determined that interventions must not only cover factual information, but teach the “skills” necessary to practice safer sex. (E.g. handling condoms, practicing putting on condoms, and role-playing situations involving pressure to have sex). This study was both Innovative and controversial.

The study was well-conducted, but it was not noted whether the incentive for the time involved played a role in influencing participation. The intervention consisted of focus groups, video tapes, games, and experimental exercises, which have been shown to have worked in other studies. Attrition rates were low, as the trial was a single-session intervention where all participants attended. Self-reported and biologically confirmed data (for STD infection only) was obtained.

SUMMARY AND CONCLUSIONS

It is important to recognize that HIV infection among youth is a serious problem within the United States. As mentioned earlier, Latino youth, who make up 15% of the U.S. national teenage population, accounted for 21% of the cumulative AIDS cases.⁵ Unprotected sexual intercourse between Latino youth has increased the rate of HIV infection.

The studies suggest that interventions for Latino youth do not take into consideration

culturally sensitive matters when addressing sexual activity. For example, it is considered improper for Latina females to discuss sexual practices with their partners. While these studies do not provide a definite answer to how to properly address unprotected sex, many do provide recommendations on how to combat HIV infection in Latino youth. These traditional gender norms seem to have created an intractable problem for the use of condoms.

The studies have shown that while Latinas are well-informed about the risks of contracting HIV from unprotected sexual intercourse, they are strongly discouraged from discussing condom use with their partners. Given this information, future research should focus on specific cultural factors that may influence condom use and both first and subsequent sexual intercourse activities among Latino youth as a function of cultural norm and expectations. Future HIV prevention programs need to be gender based and intervene on different elements identified as specific barriers for safe sex among female and male Latino youth. Reduction of HIV risk requires the inclusion that both participants are responsible for their own health and for their partner's health and well-being.

LITERATURE REVIEWED

Tapia-Aguirre V, Arillo-Santillan E, and Allen A. (2004). Associations among condom use, sexual behavior, and knowledge about HIV. A Study of 13,293 Public School Students. *Archives of Medical Research*, 35:334-343.

Warren CW, Santelli S, Everett SA, Kann L, Collins JL, Cassell C, Morris L, and Kolbe

LJ. (1998). Sexual Behavior among U.S. High School Students, 1990–1995. *Planning Perspectives*. 30(4):170–172

Roye CF. (1998). Condom Use by Hispanic and African-American Adolescent Girls Who Use Hormonal Contraception. *Journal of Adolescent Health*. 23:205–211.

Villarruel AM, Jemmott JB, Jemmott LS, Ronis DL. (2004). Predictors of Sexual Intercourse and Condom Use Intentions Among Spanish-Dominant Latino youth. *Nursing Research*. 52(3):172-181.

Martinez-Donate AP, Hovell MF, Blumberg, EJ, Zellner JA, Sipan CL, Shillington AM, and Carrizosa C. (2004). Gender Differences in Condom-Related Behaviors and Attitudes Among Mexican Adolescents Living on the U.S.-Mexico Border. *AIDS Education and Prevention*. 16(2):172-186.

Gurman T and Borzekowski DLG. (2004) Condom Use Among Latino College Students. *Journal of American College Health*. 52(4):169-178.

Sneed CD, Morisky DE, Rotheram-Borus MJ, Ebin V, Malotte CK, Lyde M, and Gill

JK. (2001). 'Don't know' and 'didn't think of it': condom use at first intercourse by Latino adolescents. *AIDS Care*. 13(3):303-308.

Jemmott JB, Jemmott LS, Braverman PK, and Fong GT. (2005). HIV/STD Risk Reduction Interventions for African American and Latino Adolescent Girls at an Adolescent Medicine Clinic: A Randomized Controlled Trial. *Arch Pediatric Adolesc Med*. 159:440-449.

REFERENCES

1. Johnson County HIV 101 documents.
2. CDC. (2002). HIV/AIDS Among Hispanics. Division of HIV/AIDS Prevention. Obtained from <http://www.cdc.gov/hiv/pubs/facts/hispanic.htm>.
3. Wood ML and Price P. (1997). Machismo and Marianismo: Implications for HIV/AIDS Risk Reduction and Education. *American Journal of Health Studies*. 13(1):44-53. Accessed on January 30, 2006 from EBSCO-HOST.
4. McQuiston C and Gordon A. (2000). The Timing is Never Right: Mexican Views of Condom Use. *Health Care for Women International*. 21:277-290. Accessed on February 10, 2006 from EBSCO-HOST.
5. Villarruel AM, Jemmott JB, Jemmott LS, and Ronis DL. (2004). Predictors of Sexual Intercourse and Condom Use Intentions Among Spanish-Dominant Latino Youth. *Nursing Research*. 52(3):172-181. Accessed on February 1, 2006 from Pub-Med.
6. Van Oss Marin B, Gomez CA, Tschann JM, and Gregorich SE. (1997). Condom Use in Unmarried Latino Men: A Test of Cultural Constructs. *Health Psychology*. 16(5):458-467. Accessed March 1, 2006 from Pub-Med.
7. Sneed CD, Morisky DE, Rotheram-Borus MJ, Ebin V, Malotte CK, Lyde M, and Gill JK. (2001). 'Don't know' and 'didn't think of it': condom use at first intercourse by Latino adolescents. *AIDS Care*. 13(3):303-308. Accessed March 1, 2006 from Pub-Med.
8. Ibanez GE, Van Oss Marin B, Villareal C, and Gomez CA. (2005). Condom use at last sex among unmarried Latino men: an event level analysis. *AIDS and Behavior*. 9(4):433-441. Accessed February 10, 2006 from Ebsco-Host.