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77. Identification of the people from whom engorged *Aedes aegypti* took blood meals in Florida, Puerto Rico, using polymerase chain reaction-based DNA profiling.
78. The association of lead-contaminated house dust and blood lead levels of children living on a former landfill in Puerto Rico.
79. Prevalence and correlates of DSM-IV substance use disorders in Puerto Rico.
80. [War on Drugs or War against Health? The pitfalls for public health of Puerto Rican drug policy].
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85. The validity of drug use self-reports among hard core drug users in a household survey in Puerto Rico: comparison of survey responses of cocaine and heroin use with hair tests.
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88. Survival of AIDS according to injecting drug use among Puerto Rican AIDS patients.
89. HCV genotype analysis in HCV-HIV-co-infected Puerto Ricans who are injecting drug users: undetermined and mixed infections.
90. Residential status and HIV risk behaviors among Puerto Rican drug injectors in New York and Puerto Rico.
91. The validity of drug use responses in a household survey in Puerto Rico: comparison of survey responses of cocaine and heroin use with hair tests.
92. Lowering HIV risk among ethnic minority drug users: comparing culturally targeted intervention to a standard intervention.
93. Between-city variation in frequency of injection among Puerto Rican injection drug users: East Harlem, New York, and Bayamon, Puerto Rico.
94. Prevalence and correlates of substance use disorders among older adolescents in Puerto Rico and the United States: a cross-cultural comparison.
95. Trends in HIV seroprevalence and needle sharing among Puerto Rican drug injectors in Puerto Rico and New York: 1992-1999.
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97. Personality and psychopathology of drug addicts in Puerto Rico.
98. [Descriptive study of animal attacks and bites in the municipality of San Juan, Puerto Rico, 1996-1998].
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100. The Spanish Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS): reliability and concordance with clinical diagnoses in a Hispanic population.
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102. The street/treatment barrier: treatment experiences of Puerto Rican injection drug users.
103. Mothering through addiction: a survival strategy among Puerto Rican addicts.
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105. Prevalence and correlates of anergy among drug users in Puerto Rico.
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111. Factors associated with changes in sex behaviour among drug users in Puerto Rico.
112. A comparison of the nutritional status and food security of drug-using and non-drug-using Hispanic women in Hartford, Connecticut.
113. Drug use and HIV risks among African-American, Mexican-American, and Puerto Rican drug injectors.
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187. Substance abuse units taught by four specialties in medical schools and residency programs.
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[1. Subst Abus. 2012;33\(1\):60-9.](#)

Assessing need for medication-assisted treatment for opiate-dependent prison inmates.

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Individuals with a history of heroin dependence are overrepresented in American correctional facilities and 75% of inmates with a drug use disorder do not receive treatment during incarceration or after release. Medication-assisted treatment (MAT) with opiate agonists, such as methadone or buprenorphine, constitutes standard of care; to guide planning for an expansion of drug treatment services in correctional facilities, a needs assessment was conducted at the Department of Correction and Rehabilitation (DCR) of Puerto Rico (PR). The authors report on the research process, the findings that informed their recommendations for the DCR to expand MAT for eligible inmates, and lessons learned.

[2. Subst Use Misuse. 2012 Mar;47\(4\):429-41. Epub 2012 Jan 4.](#)

A latent class analysis of alcohol abuse and dependence symptoms among Puerto Rican youth.

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The study aim was to classify youths into homogenous groups based on their symptoms of Alcohol Abuse and Dependence. An NIDA-funded cross-sectional survey was administered to 622 middle and high school students in San Juan, Puerto Rico in 2000. Latent class analysis (LCA) examined the Alcohol Abuse and Dependence symptoms. Three distinct classes of drinkers were found: low (86.0% of sample), moderate (11.7% of sample), and high (2.3% of sample) severity classes which were distinguished by differing estimated probabilities of symptom reporting. The study has implications for the diagnosis of Alcohol Abuse and Dependence among Puerto Rican youths. Limitations are also noted.

[3. AIDS Care. 2011 Nov;23\(11\):1467-71. Epub 2011 Jun 16.](#)

Differential gender effects of depression on use of HIV medications among HIV-positive Puerto Rican drug users.

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Many barriers to the use of HIV medications have been identified. Research findings have also shown a gender disparity in HIV care behaviors. However, interaction effects of gender with the potential barriers to use of HIV medications among HIV-positive minority drug users remain under-studied. This study examined interaction effects of gender with potential moderating factors (i.e., individual and network characteristics) on the use of HIV medications. Analyses were based on 260 HIV-positive Puerto Rican heroin and cocaine users, recruited in New York (N=178) and Puerto Rico (N=82) in 1998-2003. HIV status was assessed using OraSure, and heroin or cocaine use was verified by urinalysis. All participants were tested and interviewed at baseline and six-month follow-up (183 males; 77 females). In predicting use of HIV medications at follow-up (HIVMEDF), use of HIV medications at baseline (HIVMED), individual characteristics (e.g., depression), network characteristics (e.g., having an intravenous drug user [IDU] sex partner), recruitment site, and interaction effects of these variables with gender, were examined in multiple logistic regression analysis. Use of HIV medications was low (29% at baseline; 40% at follow-up). HIVMED, recruitment site, gender, and depression had significant main effects on HIVMEDF. Depression also had a significant interaction effect with gender on HIVMEDF. Unlike men, women with depression were less likely than women without depression to use the medications. The findings indicate that gender-specific issues should be addressed by treatment programs for HIV-positive drug users, with particular efforts needed to enhance use of medications for depressed women.

[4. J Health Care Poor Underserved. 2011 Aug;22\(3\):962-82.](#)

Prevalence of HCV risk behaviors among prison inmates: tattooing and injection drug use.

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Hepatitis C virus (HCV) is the most common blood-borne chronic viral infection in the United States and it is over represented in incarcerated populations. This study estimates if in prison tattooing is associated with self reported HCV infection in a probabilistic sample of 1,331 sentenced inmates in Puerto Rico prisons anonymously surveyed in 2004, who had previously been tested for HCV. Analysis were carried out with the total sample and among non-injectors (n=796) to control for injection drug use (IDU) and other confounders. Nearly 60% of inmates had acquired tattoos in

prison. HCV was reported by 27% of subjects in the total sample and by 12% of non-injectors who had undergone tattoos in prison. IDU was the strongest predictor of HCV in the total sample (OR=5.6, 95% CI=3.2-9.7). Among non injectors, tattooing with reused needles or sharp objects and/ or reusing ink was positively associated with HCV self-report (OR=2.6, 95% CI=1.3-5.5). Tattooing is a common occurrence in this prison setting. Findings suggest that preventive interventions are required to reduce the risk of HCV transmission through unsterile tattooing and injection practices.

[5. P R Health Sci J. 2011 Jun;30\(2\):65-8.](#)

HIV-related risk behaviors among a sample of men who have sex with men in Puerto Rico: an overview of substance use and sexual practices.

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OBJECTIVE: Despite the growing impact of the human immunodeficiency virus (HIV) epidemic in Puerto Rico (PR), limited epidemiological research on men who have sex with men (MSM) has been conducted. The aim of this study was to describe HIV-related risk behaviors in a sample of MSM in PR. METHODS: A secondary data analysis of a household survey of the adult population of PR was performed in order to describe substance use and sexual practices related to HIV transmission and seropositivity for hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV), HIV, and type 2 herpes simplex virus (HSV-2) in MSM. Data regarding substance use and sexual practices were collected using audio computer-assisted self-interviewing (A-CASI). Descriptive statistics were used to examine lifetime and recent (12 months) prevalence of substance use and sexual practices. RESULTS: Of the 640 men interviewed, 41 (6.4%) reported having ever had sex with another man on at least one occasion. Approximately one-fourth of MSM reported having used marijuana (24.4%) and cocaine (24.4%) in the past 12 months. Nearly 42% of the MSM reported an early age of sexual initiation (< 15 years), and 61% reported having had at least 10 sexual partners in their lifetime. Seropositivity rates for HAV, HSV-2, HIV, HCV, and HBV were 43.3%, 32.4%, 7.3%, 4.9%, and 4.9%, respectively. CONCLUSION: This is the first study to attempt to examine high-risk behaviors related to HIV in a population-based sample of MSM in PR. Concurrent efforts that will help to intensify research and prevention initiatives among MSM are necessary, especially those that will enhance awareness of screening for HIV, HCV, and other sexually transmitted infections, access to HAV and HBV vaccinations, substance use, and identification of social barriers.

[6. Psychol Rep. 2011 Apr;108\(2\):339-57.](#)

Developmental trajectories of marijuana use from adolescence to adulthood: personality and social role outcomes.

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Longitudinal trajectories of marijuana use from adolescence into adulthood were examined for adverse life-course outcomes among African-Americans and Puerto Ricans. Data for marijuana use were analyzed at four points in time and on participants' personality attributes, work functioning, and partner relations in adulthood using growth mixture modeling. Each of the three marijuana-use trajectory groups (maturing-out, late-onset, and chronic marijuana-users) had greater adverse life-course outcomes than a nonuse or low-use trajectory group. The chronic marijuana-use trajectory group was highly associated with criminal behavior and partners' marijuana use in adulthood. Treatment programs for marijuana use should also directly address common adverse life-course outcomes users may already be experiencing.

[7. Aggress Behav. 2011 Jul-Aug;37\(4\):349-61. doi: 10.1002/ab.20397. Epub 2011 May 4.](#)

Developmental associations between externalizing behaviors, peer delinquency, drug use, perceived neighborhood crime, and violent behavior in urban communities.

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This study examines the precursors of violent behavior among urban, racial/ethnic minority adults. Data are from an ongoing study of male and female African Americans and Puerto Ricans, interviewed at four time waves, Time 1-Time 4 (T1-T4), from adolescence to adulthood. Structural Equation Modeling was used to analyze the developmental pathways, beginning in mid-adolescence (T1; age = 14.0 years), to violent behavior in adulthood (T4; age = 29.2 years). The variables assessed were: components of externalizing behaviors (i.e., rebelliousness, delinquency; T1, T3); illicit drug use (T2); peer delinquency (T2); perceived neighborhood crime (T4); and violent behavior (T3, T4). Results showed that the participants' externalizing behaviors (rebelliousness and delinquency) were relatively stable from mid-adolescence (T1; age = 14.0 years) to early adulthood (T3; age = 24.4 years). The participants' externalizing behaviors in mid-adolescence also had a direct pathway to peer delinquency in late adolescence (T2; age = 19.1 years). Peer delinquency, in turn, had a direct pathway to the participants' illicit drug use in late adolescence (T2), and to externalizing behaviors in early adulthood (T3). The participants' illicit drug use (T2; age = 19.1 years) had both direct and indirect paths to violent behavior in adulthood (T4). The participants' externalizing behaviors in early adulthood (T3) were linked with violent behavior at T3, and perceived neighborhood crime (T4), both of which had direct pathways to violent behavior in adulthood (T4). The findings suggest developmental periods during which externalizing behaviors, exposure to delinquent peers, illegal drug use, and neighborhood crime could be targeted by prevention and intervention programs in order to reduce violent behavior.

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[8. Arch Suicide Res. 2011;15\(2\):151-9.](#)

Polydrug use and attempted suicide among Hispanic adolescents in Puerto Rico.

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This study was aimed at examining the relationship between suicidal attempts, polydrug use, and depression in adolescents. A sample of 691 adolescents and their parents were interviewed. Subjects who met the criteria for depression and those who used alcohol were significantly more likely to be suicidal attempters (OR = 6.8, $p < 0.001$; OR = 7.5, $p < 0.001$). Polydrug users were significantly more likely to attempt suicide (OR = 8.8, $p = 0.032$). Adolescents with mothers who met the criteria for depression were more likely to report suicide attempts (OR = 2.4, $p = 0.069$). Health professionals need to screen for polydrug use and depression to prevent future suicidal behaviors.

[9. Subst Abuse Treat Prev Policy. 2011 Apr 11;6:7.](#)

Xylazine (veterinary sedative) use in Puerto Rico.

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Human xylazine use in Puerto Rico merits particular attention for its unprecedented scale and depth. Although Puerto Rican injecting drug users (IDUs) have reported using this drug since the early 2000s, little is being done in the research and service delivery sectors as it is claimed that xylazine severely impacts the health of its users. This report provides information on xylazine use and its associated harms. Data from one semi-structured interview collected in New York City (2007-2008) as part of a larger research study with migrant Puerto Rican drug users is presented as a case study. Xylazine, a veterinary sedative, is an adulterant and complement to other drugs and its chronic use is reported to be associated with physical deterioration. Because human xylazine use has been reported in other locations outside of Puerto Rico, this substance could also emerge as an adulterant in other markets to the levels currently experienced in Puerto Rico. Research and interventions are needed to provide adequate services on the island, better understand how the use of xylazine affects its users, and to reduce the possibility of increased xylazine use on the state-side.

[10. Nurs Health Sci. 2011 Mar;13\(1\):16-26.](#)

Unhealthy substance-use behaviors as symptom-related self-care in persons with HIV/AIDS.

Brion JM, Rose CD, Nicholas PK, Sloane R, Corless IB, Lindgren TG, Wantland DJ, Kempainen JK, Sefcik EF, Nokes KM, Kirksey KM, Eller L, Hamilton MJ, Holzemer WL, Portillo CJ, Mendez MR, Robinson LM, Moezzi S, Rosa M, Human S,

Maryland M, Arudo J, Ros AV, Nicholas TP, Cuca Y, Huang E, Bain C, Tyer-Viola L, Zang SM, Shannon M, Peters-Lewis A, Willard S.

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Unhealthy substance-use behaviors, including a heavy alcohol intake, illicit drug use, and cigarette smoking, are engaged in by many HIV-positive individuals, often as a way to manage their disease-related symptoms. This study, based on data from a larger randomized controlled trial of an HIV/AIDS symptom management manual, examines the prevalence and characteristics of unhealthy behaviors in relation to HIV/AIDS symptoms. The mean age of the sample (n = 775) was 42.8 years and 38.5% of the sample was female. The mean number of years living with HIV was 9.1 years. The specific self-reported unhealthy substance-use behaviors were the use of marijuana, cigarettes, a large amount of alcohol, and illicit drugs. A subset of individuals who identified high levels of specific symptoms also reported significantly higher substance-use behaviors, including amphetamine and injection drug use, heavy alcohol use, cigarette smoking, and marijuana use. The implications for clinical practice include the assessment of self-care behaviors, screening for substance abuse, and education of persons regarding the self-management of HIV.

[11. *Subst Use Misuse*. 2011;46\(2-3\):254-63.](#)

HIV risk and prevention among Hispanic immigrants in New York: the salience of diversity.

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The importance of identifying differences in HIV risk between Hispanic subgroups is the focus of this article. Data are drawn from two New York-based HIV-related studies: among Puerto Rican drug users and among new immigrants from Central America, the Dominican Republic, and Mexico. Results indicated that intercultural individuals (i.e., those involved in both Puerto Rican and mainland cultures) were less risky in terms of injection- and sex-related risk behaviors and that geographic and other contextual factors, along with cultural norms, influence risk behaviors for immigrants. Both studies indicate the need to differentiate subgroup factors affecting HIV risk and prevention behaviors to develop appropriate and effective community-based interventions. The study's limitations are noted.

[12. *J Urban Health*. 2011 Jun;88\(3\):493-506.](#)

A three-generational study of risk factors for childhood externalizing behavior among African Americans and Puerto Ricans.

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This is the first prospective study to examine the precursors of child externalizing behavior across three generations of African Americans and Puerto Ricans. Participants comprised a community cohort of male and female African Americans and Puerto Ricans (N = 366, X⁻ age = 29.4 years), who are part of an ongoing study of drug use and problem behaviors, and who had a child. Data were collected at four time waves, spanning the participants' adolescence to adulthood. Questionnaires were initially self-administered in schools in East Harlem, NY, USA (time 1). Subsequently, structured interviews were conducted by trained interviewers (times 2 and 3), and self-administered via mail (time 4). The independent variables consisted of the participants' prospective reports of their (a) relationships with their parents during adolescence, (b) depressive mood and drug use (adolescence to adulthood), (c) relationship with their oldest child between the ages of 6-13, and (d) perceptions of neighborhood crime and deterioration (in adulthood). The dependent variable was externalizing behavior in the participant's oldest child (X⁻ age = 9.6 years; SD = 2.0). Structural equation modeling showed that the parent-child relationship during participants' adolescence was linked with the participants' depressive mood and drug use which, in turn, were associated with the participants' relationship with their own child, as well as with neighborhood crime and deterioration when participants were adults. The participants' depressive mood, and relationship with their own child, as well as neighborhood crime and deterioration, each had a direct pathway to externalizing behavior in the participant's child. Findings suggest that intervention programs and public policy should address parental attributes, neighborhood factors, and, especially, parenting skills, to reduce risk factors for the intergenerational transmission of externalizing behavior.

[13. *Wilderness Environ Med*. 2010 Dec;21\(4\):353-6. Epub 2010 Aug 5.](#)

Is the Puerto Rican racer, *Alsophis portoricensis*, really harmless? A case report series.

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Puerto Rico (PR) is home to 10 indigenous species of snake. *Alsophis portoricensis* has traditionally been considered harmless. In 1961, Hageman classified *A. portoricensis* as somewhere between "venomous" and "nonvenomous." In 1966, Heatwole and Banuchi reported the only case found in the literature of a "venomous" bite from *Alsophis portoricensis*. Only 6 cases of snakebite were reported to the PR Department of Health from 1998 to 2007; ecchymosis, swelling, and abnormal vital signs were noted in all of the cases. In 5 of these 6 cases, the captured snake was, in fact, identified as *Alsophis portoricensis* of the Colubridae family; in the remaining case, the description strongly suggests that it was the same species as the others. All bites were inflicted on fingers, which were presented for evaluation from 2 to 24 hours after the event. All documented cases report that the bite lasted from 1 to 4 minutes. All of the victims presented with localized pain and ecchymosis. Localized edema extended from the hand to the elbow in 4 cases, and up to the shoulder in 2 cases. All patients were treated symptomatically, observed at the Emergency Department (ED), and discharged home within 24 hours after the ED evaluation. All patients reported the resolution of symptoms within 1 week. Traditionally, PR has not been associated with any dangerous species of snake. These cases show that the second most abundant snake on the island can inflict a venomous bite, with local and systemic symptoms that warrant adequate preparation by the medical community.

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[14. Subst Use Misuse. 2010 Aug;45\(10\):1605-22.](#)

Needle sharing among Puerto Rican injection drug users in Puerto Rico and Massachusetts: place of birth and residence matter.

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This study explored whether place of birth and residence was associated with needle sharing for Puerto Rican injection drug users (IDUs) (N = 348). In-person interviews were conducted in Puerto Rico and Massachusetts during 2005-2007. Multivariate regression analyses revealed IDUs born and living in Puerto Rico were four times more likely to have shared needles compared to those residing in Massachusetts. Respondents residing in Massachusetts were 76% less likely to have ever shared needles with an HIV-positive individual, controlling for covariates. Findings highlight the increased HIV-risk of Puerto Rican IDUs born and residing in Puerto Rico. Prevention and treatment needs are discussed.

[15. Addict Behav. 2010 Jul;35\(7\):667-72. Epub 2010 Feb 10.](#)

The validity of drug use responses in a household survey in Puerto Rico: comparison of survey responses with urinalysis.

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AIMS: The available evidence suggests that the validity of drug use responses in general population surveys is low. We have conducted a household survey to examine viral infections in the general population of Puerto Rico employing a number of procedures believed to increase the validity of drug use responses, as well as confidentiality and privacy: telling participants of toxicological verification of drug use prior to the interview, ACASI self-interviewing, and interviewing outside households in mobile examination units. METHODS: The study employed a stratified cluster sample of 1654 adults 21 to 64 years old, 532 recruited while urine samples were being collected and 1122 recruited after urinalysis was discontinued due to budgetary reasons. RESULTS: Drug use rates calculated from participants recruited while urinalysis was being conducted did not vary significantly to those derived from participants recruited after urinalysis was discontinued. Sensitivity of responses of drug use during the last three days was 80.0% for marijuana, 76.2% for cocaine, and 40.0% for heroin. The lower validity of heroin reports did not seem to be the result of underreporting as it was reported by more individuals than the test detected. CONCLUSION: We conjecture that the reasonably good validity of the drug use responses might have been the result of the parent study being about a health issue other than drug use, and that interviewing was conducted outside households in mobile units. These findings buttress the value of conducting methodological trials to identify procedures which yield valid responses of drug use.

[16. Neurotoxicol Teratol. 2010 Mar-Apr;32\(2\):295-6. Epub 2010 Jan 26.](#)

Report of the thirty-third annual meeting of the Neurobehavioral Teratology Society, 2009.

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[17. Addict Behav. 2010 May;35\(5\):432-7. Epub 2009 Dec 21.](#)

High-risk drug use and sexual behaviors among out-of-treatment drug users: an aging and life course perspective.

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High-risk injection drug use and its accompanying sexual behaviors have large social and financial costs. However, little is known about how age and age at first drug use are related to high-risk injection or sex behaviors. The current study draws on life course perspectives and data from the NIDA Cooperative Agreement to examine the relationship between eight high-risk behavior variables and age and age at first drug use. Random effects negative binomial regression models reveal that the frequency of high-risk sexual behaviors in the past month decreases up to 28% with each decade of age, although the frequency of high-risk injection behaviors in the past month increases by up to 62% with each decade of age. Both high-risk injection and high-risk sex behaviors are lower among those who initiated first drug use at later ages. Previous research has indicated the importance of interventions to reduce the high-risk sexual behaviors of older drug users. The current study suggests a refocusing of public health efforts on their high-risk injection habits. Copyright (c) 2009 Elsevier Ltd. All rights reserved.

[18. Am J Drug Alcohol Abuse. 2009;35\(2\):73-9.](#)

Gender comparisons of factors associated with drug treatment utilization among Puerto Rican drug users.

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OBJECTIVE: This study examined gender-specific effects of social bonds, network characteristics, and other factors on drug treatment enrollment among Puerto Rican drug users. METHOD: Participants (425 women; 1,374 men) were recruited in New York and Puerto Rico in 1998-2003. RESULTS: Gender differences were found: education (< high school/GED) and having a sex partner who is an injection drug user (IDU) were significantly related to current enrollment in drug treatment (EDT) for women; for men, having an IDU friend (negatively) had a main effect on EDT, and having an IDU friend also had a significant interaction effect with their own injection drug use on EDT. For both women and men, recruitment site (New York), having health insurance, and prior methadone treatment were significant predictors of EDT. CONCLUSION: The findings may be useful in developing gender-differentiated drug counseling and treatment efforts that engage women's sex partners and men's friendship networks to build support for drug treatment.

[19. AIDS Behav. 2009 Jun;13\(3\):523-31. Epub 2009 Mar 24.](#)

Pilot trial of an intervention aimed at modifying drug preparation practices among injection drug users in Puerto Rico.

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Injection drug users (IDUs) contaminate preparation materials with blood-borne pathogens by using syringes as measuring and dispensing devices. In collaboration with IDUs, we developed a preventive intervention consisting of four new preparation practices aimed at avoiding the use of syringes in the preparation, and reducing the contamination of the materials. This report describes the results of a pilot trial introducing the new practices to ascertain their adoption

potential and their potential efficacy in reducing contamination. Participants comprised 37 active IDUs among whom the new practices were promoted during 16 weeks. In addition to self-reported behaviors, the study collected cookers and plastic caps from shooting galleries and tested them for the presence of blood residues. Adoption rates were: (1) cleaning of skin area with hand sanitizer--65.6%; (2) directly pouring water with a dropper into the cooker--56.3%; (3) drawing drug solution with a preparation syringe and syringe filter--34.4%; and, (4) backload rinsing syringes--53.1%. Rates of blood residues detected in cookers and plastic caps were 41.7% prior to the trial, 28.6% at week 8, 24.6% at week 14, and 12.0% at week 18. We believe the results of the pilot trial are compelling and suggest that this intervention merits further formal testing.

[20. Subst Use Misuse. 2009;44\(4\):578-92.](#)

Biculturalism and HIV-risk behaviors among Puerto Rican drug users in New York City.

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Biculturalism refers to two independent processes of acculturation, one to the host society's culture and another to the culture of origin. This study examined the relationship between biculturalism and HIV-related risk behaviors in a sample of injecting and noninjecting Puerto Rican drug users (N = 259), recruited in New York City in 2005-2006. Biculturalism was measured by two scales: involvement in (i) American culture (AMBIC) and (ii) Puerto Rican culture Biculturalism (PRBIC). The majority (78%) of the participants were males, with a mean age of 42 years. About half were born in Puerto Rico, and the average length of stay in the United States was 26 years. In multiple logistic-regression analysis, AMBIC was significantly related to lower injection risk after controlling for other factors including gender, age, and MMTP enrollment, while PRBIC was a significant predictor of higher sex risk. Involvement in the host culture and the culture of origin differed in their relationship to risk behaviors, indicating that incorporating assessments of biculturalism may be useful in assessing and addressing migrants' behaviors, including HIV-risk behaviors. The study's limitations have been noted.

[21. J Epidemiol Community Health. 2009 Apr;63\(4\):310-6. Epub 2009 Jan 15.](#)

Substance use and behaviour disorders in Puerto Rican youth: a migrant family study.

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BACKGROUND: Hispanics in the USA have higher rates of substance use disorders than similar ethnic groups residing in Latin American nations, and recent evidence suggests an increase in substance use among US Hispanic youth. This investigation examines the familial and societal correlates of this increase by comparing Puerto Rican families residing in the mainland USA and Puerto Rico. **METHODS:** Using migrant and controlled family study methods, 279 probands in San Juan and 236 probands in New Haven were recruited from treatment clinics and the general community to compose four diagnostic groups: drug abuse/dependence; alcohol abuse/dependence; psychiatric controls; unaffected controls. 806 biological offspring aged 12-17 were then directly interviewed. **RESULTS:** Total rates for alcohol use were greater among San Juan youth than their migrant counterparts. By contrast, US migrant adolescents were more likely to use cannabis. A strong association was observed between parental and child substance use at both sites, particularly for boys, and offspring of probands with drug use disorders were at greatest risk for substance use and related disorders. Familial aggregation patterns did not vary substantially by site. **CONCLUSIONS:** Despite societal influences on the magnitude and patterns of substance use in migrant youth, the consistent influence of parental disorders across sites reveals that the cross-generational transmission of substance use disorders in prior studies extends to Hispanic families and is an important factor to consider in the development of prevention strategies.

[22. J Immigr Minor Health. 2010 Apr;12\(2\):179-86. Epub 2008 Dec 18.](#)

Migrant drug users: predictors of HIV-related sexual and injection risk behaviors.

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BACKGROUND: Puerto Rican drug users recruited in NY who previously used drugs in Puerto Rico (PR) have been found to have higher HIV injection and sex-related risk behaviors than those who had not used in PR. This study examined predictors of risk among migrant Puerto Rican drug users. (For the purpose of this paper, the term "migrant" was used

to designate Puerto Rican drug users who had used drugs in Puerto Rico and were recruited in New York or New Jersey). METHODS: A total of 290 drug users who had previously used drugs in PR were recruited in NY and New Jersey and interviewed regarding drug use history and HIV risk behaviors. RESULTS: Participants engaged in high risk behaviors, e.g., 39% shared injection paraphernalia and 62% reported unprotected sex. Multivariate analyses found that predictors of injection-related risk included being born in PR and purchasing drugs jointly with other drug users; predictors of sex-related risk included younger age and homelessness. DISCUSSION: Addressing risk reduction among those drug users who were born in Puerto Rico and are younger or homeless was indicated, and efforts to reach those at highest risk through NEPs was recommended.

[23. AIDS Educ Prev. 2008 Aug;20\(4\):325-37.](#)

Sex risk behaviors of drug users: a dual site study of predictors over time.

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Reducing sex risk behaviors among high-risk injection drug users (IDUs) and crack smokers is a continuing challenge for HIV prevention. Based on a longitudinal study of sexually active Puerto Rican IDUs and crack smokers in New York (n = 573) and Puerto Rico (n = 264), baseline predictors of changes in sex risk (number of unprotected sex acts) at 6- and 36-month follow-up interviews were examined. In New York, predictors of higher sex risk were being younger, having primary partners, having more other sex partners, never exchanging sex, having lower self-efficacy for reducing sex risk behaviors and being HIV-negative, and these predictors were significant at both postbaseline periods. In Puerto Rico, short-term predictors included being male, having primary partners, never exchanging sex, lower sex risk norms and lower self-efficacy. However, only having primary partners was significant in longer-term behaviors. Results indicated the need for enhancing self-efficacy and for developing risk reduction strategies related to community differences.

[24. Ethn Dis. 2008 Spring;18\(2 Suppl 2\):S2-99-104.](#)

Profile of Puerto Rican HIV/AIDS patients with early and non-early initiation of injection drug use.

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BACKGROUND: Early initiation of injection drug use (IDU) increases the risk of HIV infection. METHODS: We compare the sociodemographic, psychosocial, and clinical profiles of HIV-positive IDU patients according to the age at which IDU was initiated. This is a cross-sectional study of 1308 patients seen from 1992 through 2005. We compared the profile of patients with early (age < 13 years) vs non-early (age > 13 years) initiation of IDU. The Fisher and chi2 differences in proportions were performed to assess difference among study groups with earlier IDU. The Mantel-Haenszel test was used to calculate the odds ratio. The Kaplan-Meier and log rank tests were used to assess the median survival. Differences were considered significant at alpha = .05. RESULTS: Early initiation of IDU was reported in 11% of our sample. The early initiation group was more likely to smoke tobacco, use alcohol, attempt suicide, have a history of incarceration, have economic problems, and have episodes of anxiety, confusion, depression, excitation, impulsivity, and violence (P < .05). The general survival time of patients was 36.9 months (95% confidence interval 31.9-42.0). A higher prevalence of candidial esophagitis and Pneumocystis jirovecii pneumonia and a lower prevalence of hepatitis C virus coinfection were seen in the early initiation group (P < .05). No differences in mortality, use of antiretroviral therapy, or CD4 T-cell count were seen. CONCLUSIONS: Differences in terms of lifestyle, stress factors, and history of psychological events were seen in the group of patients with early initiation of IDU seen in our facilities. Differences in the clinical scenario were documented.

[25. Am J Addict. 2008 Jul-Aug;17\(4\):271-7.](#)

Earlier violent television exposure and later drug dependence.

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This research examined the longitudinal pathways from earlier violent television exposure to later drug dependence. African American and Puerto Rican adolescents were interviewed during three points in time (n = 463). Exposure to violent television programs in late adolescence predicted exposure to violent television programs in young adulthood, which in turn was related to tobacco/marijuana use, nicotine dependence, and later drug dependence. Some policy and clinical implications suggest regulating the times when violent television programs are broadcast, creating developmentally targeted prevention/treatment programs, and recognizing that watching violent television programs may serve as a cue regarding increased susceptibility to nicotine and drug dependence.

[26. AIDS Educ Prev. 2008 Jun;20\(3\):249-57.](#)

Peer norms and sharing of injection paraphernalia among Puerto Rican injection drug users in New York and Puerto Rico.

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National Development and Research Institutes, Inc., Center for Drug Use and HIV Research, New York, NY 10010, USA. This study examines the influence of peer norms on sharing of injection paraphernalia (e.g., indirect sharing behaviors, including sharing of cookers, cotton, rinse water and back/front loading) among Puerto Rican injection drug users (IDUs) in Bayamón, Puerto Rico, and East Harlem, New York City. Data were collected from 873 Puerto Rican IDUs recruited in the two locations by outreach workers. Multiple logistic regression was conducted using sociodemographic and other control variables (e.g., education, frequency of injection, pooling money to buy drugs, use of needle exchange program, injection in galleries and syringe sharing behaviors) and two types of norms related to sharing of injection paraphernalia-encouraging risk norms (what others approve) and objecting to risk norms (what others disapprove). One type of norms, encouraging or approval norms, was associated with indirect sharing in New York but not in Puerto Rico. Pooling money to buy drugs, use of shooting galleries and syringe sharing was associated with indirect sharing in both locations. Prevention programs to reduce indirect sharing behaviors should take into consideration different types of risk norms in order to reduce indirect sharing risk behaviors.

[27. Rev Panam Salud Publica. 2008 May;23\(5\):325-32.](#)

Severity of alcohol use and problem behaviors among school-based youths in Puerto Rico.

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OBJECTIVES: The present study sought to: (a) categorize youths into groups based on their level of alcohol use and number of symptoms of alcohol abuse and dependence defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), and (b) examine whether these categories were associated with other problem behaviors in which youths engage (marijuana use, sexual intercourse, and having been arrested or having trouble with the law). **METHODS:** The study is based on a cross-sectional survey administered to 972 school-based youths from one middle school and one high school in San Juan, Puerto Rico. Youths were categorized based on their alcohol use and alcohol problems. These categories were then examined for associations with lifetime marijuana use, lifetime sexual intercourse, and having been arrested or having had trouble with the law in the past year. The original eight categories of alcohol use were collapsed into six categories based on the results. **RESULTS:** For virtually every group characterized by higher severity of alcohol use and alcohol problems, researchers found an increasing prevalence of marijuana use in their lifetimes, increasing odds of sexual intercourse in their lifetimes, and having had trouble with the law in the past year. **CONCLUSIONS:** Knowing about variations in alcohol use and alcohol problems may be instrumental in measuring the degree to which youths may also be engaging in a range of other elevated risk behaviors and a progression to more serious forms of alcohol and drug use.

[28. Drug Alcohol Depend. 2008 Aug 1;96\(3\):290-3. Epub 2008 May 9.](#)

GC-MS confirmation of xylazine (Rompun), a veterinary sedative, in exchanged needles.

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In order to assess the extent of xylazine (Xyz) injection in Puerto Rico, two waves of used-syringe collections were performed. In the first, syringes were gathered, anonymously and without additional information; in the second, a short interview, also anonymous, was administered. We found Xyz in 37.6% of the collected syringes; the majority of the Xyz-

containing syringes came from ranching communities. Syringes containing Xyz more frequently also contained "speedball" than those without (90.6% and 66.7%, respectively). Self-reports of Xyz injection deviated markedly from actual detection: only 50% (self-described users) and 22% (self-described non-users) of the collected syringes contained the drug. With a high prevalence of skin ulcers (38.5% vs. 6.8%; $p < 0.001$), Xyz users were more likely to be in poor health compared to non-users. Surprisingly, though a higher percentage of Xyz users than non-users had college-level educations (23.1% vs. 5.5%), they were more likely to be homeless (64.1% vs. 37%).

[29. P R Health Sci J. 2007 Sep;26\(3\):205-11.](#)

Gender differences in drug use and sexual risk behaviors among non-injecting heroin users in Puerto Rico.

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INTRODUCTION: During the 1990s non-injected heroin use (NIHU) increased notably in several countries. However, very few studies have examined the drug-using practices and other problem behaviors of NIHUs. In this study, we compared male and female NIHUs from Puerto Rico across a number of domains. **METHODS:** Recruitment proceeded through visits to drug-copping areas and the local hangouts in their vicinity. Subjects were eligible if they were 18 to 25 years old, had never injected any drugs, and had recently used heroin or cocaine. Study participants were administered a computer-assisted personal interview. **RESULTS:** Of the 412 NIHUs recruited at the time of this study, 74 (18.0%) were females. Female NIHUs were more likely to report sexual assaults and more likely to manifest severe symptomatology of post-traumatic stress disorder than male NIHUs (35.1% vs. 3.6%, $p < .01$, and 40.5% vs. 25.7%, $p = .01$, respectively). Females were less likely to report a source of emotional support than males (86.5% vs. 95.3%, $p < .01$). Close to one in four of the females (23.0%) reported a history of sexually transmitted infections, compared to three percent of the males ($p < .01$). HIV seroprevalence among females was 4.3% compared to 0.6% among males ($p = .01$). **DISCUSSION:** Female heroin users seem to present a host of different needs compared to male heroin users. Given the scarcity of existing programs for female drug users in Puerto Rico, designing supportive systems that effectively address the specific needs of drug-using women should become a high-priority public health issue.

[30. Eval Program Plann. 2008 Feb;31\(1\):64-73. Epub 2007 Jul 7.](#)

Puerto Rican injection drug users: Prevention implications in Massachusetts and Puerto Rico.

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This study examines whether place of residence is a factor associated with reporting a positive HIV/AIDS, Hepatitis C (HCV), or Sexually Transmitted Disease (STD) status in a sample of 400 injection drug users (IDUs) residing on the Island of Puerto Rico ($N = 139$) and in western Massachusetts ($N = 261$). Logistic regression models revealed that IDUs residing in western Massachusetts were 66% less likely to be HIV positive compared to IDUs residing in Puerto Rico ($p < .000$) while IDUs residing in western Massachusetts were about 67% less likely to have a positive STD status than those residing in Puerto Rico ($p < .000$). Place of residence was not significantly associated with HCV status. Results indicate the need to develop prevention programs tailored to the unique socio-cultural context of Puerto Rican IDUs residing on the Island of Puerto Rico whose circumstances differ from those in the mainland US. To reduce drug use, HIV/AIDS, HCV, and STDs among Puerto Ricans in both locales, the Capacity Enhancement Model is proposed in order to develop more effective prevention programs.

[31. Am J Prev Med. 2007 Jun;32\(6 Suppl\):S219-25.](#)

Psychiatric comorbidity and acculturation stress among Puerto Rican substance abusers.

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BACKGROUND: Although acculturation to the United States has been associated with an increase in substance, mood, and anxiety disorders in Latino populations, few studies have examined this concept relative to comorbidity among

these syndromes. **METHODS:** This study compares the prevalence and patterns of psychiatric comorbidity among Puerto Ricans with substance use disorders living in San Juan (Puerto Rico) to those who have migrated to New Haven (Connecticut) and examines the association between acculturation-related stress and the prevalence and patterns of psychiatric comorbidity among those who have migrated to New Haven. **RESULTS:** Lifetime levels of nearly all comorbid psychiatric disorders among respondents with substance use disorders were generally similar across sites. However, the risk of any co-occurring psychiatric disorder was higher among substance use disorder cases in New Haven who reported high levels of total acculturation stress and family-specific acculturation stress. These findings were generally accounted for by associations between affective disorders and high scores on these indicators of acculturation stress. **CONCLUSIONS:** The overall prevalence and patterns of psychiatric comorbidity are remarkably similar among Puerto Rican substance abusers whether they live in San Juan or have migrated to New Haven, thereby demonstrating robustness to differences in geographic location. Nevertheless, the degree of acculturation-related family stress is positively associated with co-occurring substance and psychiatric disorders, particularly affective disorders. Intervention in family strain related to the acculturation process may diminish the development of comorbid mental disorders and assist in implementing successful treatment of substance abuse.

[32. Am J Drug Alcohol Abuse. 2007;33\(2\):291-9.](#)

Predictors of injection drug use cessation among Puerto Rican drug injectors in New York and Puerto Rico.

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More than half of all AIDS cases among Puerto Ricans have been attributed to injection drug use. Predictors of injection drug use cessation were examined among Puerto Rican injection drug users (IDUs) in New York and Puerto Rico. Analysis of baseline and 6-month follow-up data from 670 IDUs in NY and 316 in PR showed that 47% NY and 20% in PR reported cessation of injection at follow-up ($p < .001$). In multivariate analyses, having been in drug treatment since baseline was the only significant predictor of cessation for both sites (NY: AOR = 1.80; PR: AOR = 3.10). Increasing availability of methadone maintenance treatment, especially in PR, was indicated.

[33. Addict Behav. 2007 Oct;32\(10\):2432-7. Epub 2007 Apr 14.](#)

Patterns of substance use onset among Hispanics in Puerto Rico and the United States.

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PURPOSE: Examine patterns of progression in substance use among Hispanic youth 13 to 17 years of age from two longitudinally representative studies. **METHOD:** Patterns of substance use among youth in Puerto Rico were examined using a longitudinal study ($n=663$) of adolescents living on the island. The National Longitudinal Study of Youth was used to examine patterns of substance use among Hispanics living in the United States ($n=1,445$). Latent transition analysis was used to estimate the probability of membership in each stage of substance use and incidence of transitions between different substance use stages over time. **RESULTS:** Six stages best described the heterogeneity in substance use among youth in Puerto Rico. Five stages were sufficient to describe patterns of substance use among youth in the United States. Youth living in Puerto Rico reported lower rates of smoking and illicit drug use, but higher rates of alcohol use, when compared with rates among Hispanics in the United States. **DISCUSSION:** Similar patterns of substance use were identified for Hispanic youth living in the United States and youth living in Puerto Rico.

[34. Compr Psychiatry. 2007 May-Jun;48\(3\):237-44. Epub 2007 Mar 21.](#)

Association between psychiatric disorders and smoking stages within a representative clinic sample of Puerto Rican adolescents.

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OBJECTIVE: We examined the prevalence of smoking behaviors and their association with specific psychiatric disorders in a representative sample of youth from behavioral health clinics in Puerto Rico. **METHOD:** A complex sampling design

was used to select the sample, and analyses were conducted to account for the unequal selection probability, stratification, and clustering. All analyses were weighted back to the clinical population from which they were drawn. Psychiatric and substance use disorders were assessed using the parent and youth versions of the Diagnostic Interview Schedule for Children, Version 4.0. RESULTS: More than one third of the sample reported experience with cigarette smoking, and approximately one quarter reported smoking at least once per week (23.4%). As expected, the alcohol and drug use disorders demonstrated some of the strongest associations with individual smoking stages. These were the only disorders that remained significantly associated with nicotine dependence after controlling for comorbidity. CONCLUSIONS: Our findings confirm the need for screening of smoking behavior and nicotine dependence in treatment settings and the integration of psychiatric/substance use treatments with smoking cessation.

[35. Subst Use Misuse. 2007;42\(1\):161-76.](#)

Do specialized services exist for LGBT individuals seeking treatment for substance misuse? A study of available treatment programs.

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Substance abuse research has demonstrated that client sexual orientation influences treatment outcomes.

Consequently, many substance user treatment programs offer services for lesbian, gay, bisexual, and transgender (LGBT) individuals. In a recent search of SAMHSA treatment listings, 11.8% (N=911) of substance user treatment programs (including residential, outpatient, and partial hospitalization) in the United States and Puerto Rico indicated that they offer specialized services for LGBT clients. However, a telephone survey we conducted in 2003-2004 revealed that 70.8% of these "LGBT" programs were no different from services offered to the general population, and only 7.4% could identify a service specifically tailored to the needs of LGBT clients. Implications for LGBT individuals seeking services are discussed, the study's limitations are noted, and future research directions are identified.

[36. AIDS Behav. 2007 Jan;11\(1\):145-50.](#)

Severe anxiety symptomatology and HIV risk behavior among Hispanic injection drug users in Puerto Rico.

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Despite an overall decrease in AIDS incidence in Puerto Rico, our studies continue to show high prevalence of HIV risk behaviors among injection drug users (IDUs). This study seeks to evaluate whether the occurrence of injection-related and sex-related HIV risk behaviors among IDUs in Puerto Rico varies with the presence of anxiety symptomatology. Subjects included 557 IDUs, recruited from street settings in poor neighborhoods in Puerto Rico. Symptoms of severe anxiety were reported by 37.1% of the study sample. Participants with severe anxiety symptoms were more likely to share needles, cotton, and rinse water; to pool money to buy drugs; and to engage in backloading, than those without severe anxiety symptoms. Participants with severe anxiety symptomatology were also more likely to practice unprotected vaginal or oral sex. The findings from this study alert HIV prevention and treatment programs to the need to address anxiety disorders within their programs.

[37. J Urban Health. 2006 Nov;83\(6\):1105-13.](#)

Prevalence and correlates of hepatitis C virus infection among street-recruited injection drug users in San Juan, Puerto Rico.

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Throughout the world, injection drug users (IDUs) are the group at highest risk for hepatitis C virus (HCV) infection. IDUs residing in the island of Puerto Rico and Puerto Rican IDUs residing in the U.S. mainland have been shown to be at very high risk of infection with HIV. However, the extent to which HCV infection has spread among IDUs in Puerto Rico is not yet known. The aims of this study were to estimate seroprevalence of HCV and to identify the correlates associated with HCV transmission. The sample was drawn through street outreach strategies and was comprised of 400 injection drug

users not in treatment, living in the San Juan metropolitan area. HCV and HIV infection were detected by enzyme-linked immunosorbent assay and the results were confirmed by Western blot. Information on sociodemographics, drug use patterns, and risk behaviors was obtained through structured interviews. Bivariate analyses and multivariate logistic regression were used to assess covariates of infection with HCV. The prevalence of HCV infection was 89%. After controlling for sociodemographic characteristics, HCV infection was positively associated with increasing years of injection, injecting in a shooting gallery, tattooing in prison, and self-reported STD infection. Notably, IDUs who had initiated drug injection within the year prior to the study interview had an HCV infection rate of 57%. This study indicates that more aggressive educational programs are urgently needed to reduce the spread of HCV infection among IDUs in Puerto Rico.

[38. J Urban Health. 2006 Nov;83\(6\):1114-26.](#)

A comparative study of mortality among Puerto Rican injection drug users in East Harlem, New York, and Bayamon, Puerto Rico.

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Center for Addiction Studies, School of Medicine, Universidad Central del Caribe, Box 60327, Bayamon, 00960-6032, Puerto Rico. hcolon@ucaribe.edu Drug users have been found to be at high risk of mortality but the mortality experience of Hispanic drug users remains understudied. This study assessed mortality among Puerto Rican injection drug users (IDUs) in New York City (NY), and in Puerto Rico (PR). Study subjects were 637 IDUs from NY and 319 IDUs from PR. Mortality was ascertained using data from the National Death Index. Annual mortality rate of the NY cohort was 1.3 per 100 person years compared to the PR cohort with a rate of 4.8. Compared to the Hispanic population of New York City, the standardized mortality ratio (SMR) of the NY cohort was 4.4. Compared to the population of Puerto Rico, the SMR of the PR cohort was 16.2. The four principal causes of death were: NY-HIV/AIDS (50.0%), drug overdoses (13.3%), cardiovascular conditions (13.3%), and pulmonary conditions (10.0%); PR-HIV/AIDS (37.0%), drug overdoses (24.1%), sepsis (13.0%), and homicide (11.1%). Modeling time to death using Cox proportional hazards regression, the relative risk of mortality of the PR cohort as compared to the NY cohort was 9.2. The other covariates found to be significantly associated with time to death were age, gender, education, social isolation, intoxication with alcohol, and HIV seropositivity. The large disparity in mortality rates found in this study suggests that health disparities research should be expanded to identify intra-group disparities. Furthermore, these results point to an urgent need to reduce excess mortality among IDUs in Puerto Rico.

[39. J Child Psychol Psychiatry. 2006 Aug;47\(8\):840-8.](#)

Gender disparities in mental health service use of Puerto Rican children and adolescents.

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BACKGROUND: Differences in service utilization indicating that boys use more mental health services than girls were analyzed to see if they could be explained by known correlates of service use. These correlates were arranged into individual (severe emotional disturbance, level of impairment and externalizing disorders), family (parental education, psychopathology and parental concern) and school factors (difficulties with school work). The objectives were to understand and identify the factors accounting for gender differences in mental health service utilization in order to develop alternatives to promote equity in service delivery. **METHODS:** A representative sample of 1,896 children 4 to 17 years of age and their primary caretakers were interviewed for this study. Reports of service use were obtained using the Service Assessment for Children and Adolescents. Logistic regression was used to assess the relationship between gender and service use, adjusting for known correlates. **RESULTS:** Our results showed that, except for impairment, other individual, family and school factors did not explain gender differences in service utilization. Males with impairment were 2.87 times more likely to receive services than impaired females ($p \leq .01$), and this result continued to hold true for impaired undiagnosed boys compared to impaired diagnoses-free girls ($p \leq .001$). **CONCLUSIONS:** Our findings showed a service disparity between impaired boys and girls who did not meet criteria for a DSM IV diagnosis, but no observed differences in service use between boys and girls who met criteria for severe emotional disturbance (SED). Continued investigations are necessary to analyze, assess and understand the different circumstances that bring boys and girls into treatment, followed by the development of appropriate intervention programs at the school and community levels.

[40. Science. 2006 Jul 28;313\(5786\):475-6.](#)

HIV/AIDS: Latin America & Caribbean. Puerto Rico: rich port, poor port.

Cohen J.

[41. Subst Use Misuse. 2006;41\(9\):1313-36.](#)

A longitudinal study of syringe acquisition by Puerto Rican injection drug users in New York and Puerto Rico: implications for syringe exchange and distribution programs.

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Increasing access to sterile syringes and new drug preparation materials is an effective means of reducing HIV transmission among injection drug users (IDUs), and a fundamental component of harm reduction ideology. The purpose of this study is to examine changes during a three-year period in syringe acquisition by street-recruited Puerto Rican IDUs characterized by frequent drug injection and high HIV seroprevalence. At baseline (1998-1999) and 36-month follow-up, 103 IDUs recruited in East Harlem, New York (NY), and 135 from Bayamón, Puerto Rico (PR) were surveyed about syringe sources and HIV risk behaviors in the prior 30 days. A majority of participants in both sites were male (NY 78.6%, PR 84.4%), were born in Puerto Rico (NY 59.2%, PR 87.4%), and had not completed high school (NY 56.3%, PR 51.9%). Compared to PR IDUs at follow-up, NY IDUs injected less (3.4 vs. 7.0 times/day, $p < .001$), and re-used syringes less (3.1 vs. 8.0 times, $p < .001$). Between baseline and follow-up, in NY the proportion of syringes from syringe exchange programs (SEPs) increased from 54.2% to 72.9% ($p = .001$); syringes from pharmacies did not increase significantly (0.2% to 2.5%, $p = .095$). In PR, the proportions of syringes from major sources did not change significantly: private sellers (50.9% to 50.9%, $p = .996$); pharmacies (18.6% to 19.0%, $p = .867$); SEP (12.8% to 14.4%, $p = .585$). The study indicates that NY SEPs became more dominant, while NY pharmacies remained a minor source even though a law enacted in 2001 legalized syringe purchases without prescription. Private sellers in PR remained the dominant and most expensive source. The only source of free syringes, the SEP, permitted more syringes to be exchanged but the increase was not statistically significant. Implications for syringe exchange and distribution programs are discussed.

[42. Subst Use Misuse. 2006;41\(6-7\):915-35.](#)

An exploratory qualitative study of polydrug use histories among recently initiated injection drug users in San Juan, Puerto Rico.

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It is well documented that drug users often modulate the effects of their primary drugs of use (e.g., cocaine) by using other drugs (e.g., alcohol), yet the effect of modulating and primary drug interactions on transitions from one class of drugs to another and from noninjected drugs to injected drugs is not clear. This issue, which is critical for understanding polydrug abuse,¹ is explored in formative research based on in-depth qualitative interviews conducted during 2003-2004 with 25 recently initiated drug injectors residing in San Juan, Puerto Rico. This study suggests that increased use of a primary drug (e.g., cocaine) was influenced by enhancing or attenuating drugs, which were used in a particular order (e.g., alcohol, heroin) reflecting effectiveness in modulating primary drugs at different use intensities, as well as by participants' perceptions of the relative dangers associated with different drugs. Neither availability nor access appeared to affect the order in which participants used modulating drugs.

[43. Cult Med Psychiatry. 2005 Dec;29\(4\):433-56.](#)

Isla evangelista-a story of church and state: Puerto Rico's faith-based initiatives in drug treatment.

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This article describes the debates leading to Puerto Rico's Mental Health Law of 2000, which defined addiction as a spiritual and social problem rather than a mental disorder, in order to trace three competing approaches to addiction in

Puerto Rico: evangelist, biomedical, and harm-reductionist. Highlighting the ways in which the evangelist approach of Puerto Rican street ministries challenges the individualism underlying US faith-based initiatives and the punitive approach of the US War on Drugs, this article concludes that the virtues of the evangelist approach to addiction would be best supported by public funding for biomedical and harm-reduction approaches within a pluralistic system of treatment for addiction.

[44. AIDS Educ Prev. 2006 Feb;18\(1\):81-90.](#)

Social support and HIV-related injection risk among Puerto Rican migrant and nonmigrant injection drug users recruited in New York City.

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This study compared the associations between social support and HIV injection risk among Puerto Rican migrant (n = 221) and nonmigrant (n = 340) injection drug users in New York City. Practical and emotional support scales were developed from 8 items and examined by migrant status as predictors of risk. Bivariate and regression analysis were conducted with drug shooting gallery use, sharing needles, paraphernalia, and number of monthly injections as dependent variables. Migrants had lower emotional (2.82 vs. 3.19, p = .002) and practical (1.87 vs. 2.05; p = .051) support than nonmigrants. Controlling for age, sex and homelessness, emotional support was negatively associated to injection frequency and (standardized coefficient = -.168, p = .020) gallery use (adjusted odds ratio [AOR] = .76, confidence interval [CI] = .62-.94, p = .011) among migrants and to an almost two fold increase in sharing syringes (AOR= 1.87, CI = 1.02-3.43; p = .041) among nonmigrants. The findings suggest that though migrants have less support than nonmigrants do, their support reduces risk and thus their likelihood of injection-related HIV infection.

[45. Drug Alcohol Depend. 2006 Sep 15;84\(2\):144-53. Epub 2006 Feb 14.](#)

Association between parental and individual psychiatric/substance use disorders and smoking stages among Puerto Rican adolescents.

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OBJECTIVE: To examine the associations between parental and individual psychiatric disorders and smoking stages among Puerto Rican youth from migrant and non-migrant families. **METHOD:** Analyses were conducted drawing on data collected as part of a migrant family study examining youth at high and low risk for substance use disorders based on the presence or absence of a parental history of substance abuse or dependence. Parents and their offspring were recruited in San Juan, Puerto Rico (n=450) and New Haven, CT, USA (n=350). **RESULTS:** Experimental smoking among adolescent offspring was associated with parent proband disorders. In contrast, regular smoking behavior, defined as at least weekly smoking for a month or more, and DSM-IV nicotine dependence were more strongly associated with the adolescents' own psychiatric disorders. With the exception of anxiety disorders, significant bivariate associations were shown between each psychiatric/substance use disorder and nicotine dependence. Once comorbidity was statistically controlled, only attention deficit hyperactivity disorder (ADHD), and alcohol and drug use disorders were significantly associated with nicotine dependence. After controlling for adolescents' psychiatric comorbidity, there was an association between parental disorders and both experimental and regular smoking in their adolescent offspring. **CONCLUSIONS:** By combining family and migrant research strategies within a single study, the present investigation was able to simultaneously examine familial, individual and sociocultural factors that may play a role in development and/or persistence of smoking behavior among Puerto Rican adolescents.

[46. Am J Trop Med Hyg. 2006 Feb;74\(2\):239-45.](#)

Morbidity and mortality profile of human immunodeficiency virus-infected patients with and without hepatitis C co-infection.

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Hepatitis C virus (HCV) and human immunodeficiency virus (HIV) co-infection is an important and frequent scenario, predominantly in injecting drug users (IDUs). The present study evaluated morbidity and mortality variation in HIV-infected patients with and without HCV co-infection. Co-infection prevalence was determined in 356 HIV-infected persons. Their clinical manifestations, laboratory findings, risk factors, HIV therapies, and mortality rates were evaluated. The prevalence of HCV was 54% in the overall group and 81% in IDUs, with a predominance of HCV genotype 1. Mortality rates were similar in patients with and without co-infection; however, co-infected patients had significantly higher liver damage as a cause of mortality when compared with those who were not co-infected. The high prevalence of HCV and an emerging mortality from liver diseases showed the significance of this co-infection in the HIV epidemic. Primary and secondary prevention are necessary to reduce the expanding impact of HCV infection in HIV patients.

[47. Health Policy. 2006 Jan;75\(2\):159-69.](#)

Drug treatment disparities among Hispanic drug-using women in Puerto Rico and New York City.

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This paper reports findings on 334 out-of-treatment drug users in Puerto Rico and 617 in New York City, at the 6-month follow-up interview of a Longitudinal Survey. Main outcomes were health care and drug treatment utilization since baseline, assessed by asking participants if they had received physical or mental health services (including HIV medications), and if they had been in methadone maintenance, inpatient or outpatient drug treatment, or drug treatment while incarcerated. Chi-square tests were used to evaluate associations between gender and the various correlates. Logistic regression was used to calculate the contribution of each variable in predicting use of drug treatment. The analysis suggests that women in both sites were likely to suffer from disparities in both health care and drug treatment utilization when compared with men, albeit women in New York utilized more drug treatment resources and were more embedded in the immediate family than their female peers in Puerto Rico. Further research to specify the impact of contextual factors at the organizational and community levels, among members of the same ethnic group residing in different sites, may prove valuable in identifying the health needs and the factors that impede or facilitate drug-using women in obtaining the most appropriate treatment. Findings from these studies can help in developing appropriate public health policy and science-based drug treatment programs to eliminate disparities such as the ones detected in this study.

[48. Drug Alcohol Depend. 2006 Jun 28;83\(2\):122-9. Epub 2005 Dec 5.](#)

Methadone maintenance in prison: evaluation of a pilot program in Puerto Rico.

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OBJECTIVES: To describe and evaluate a pilot methadone maintenance program for heroin-dependent inmates of Las Malvinas men's prison in San Juan, Puerto Rico. **METHODS:** Data from self-report of inmates' drug use before and during incarceration, attitudes about drug treatment in general and methadone maintenance in particular, and expectations about behaviors upon release from prison and from testing inmates' urine were analyzed comparing program patients (n=20) and inmates selected at random from the prison population (n=40). Qualitative data obtained by interviewing program staff, the correctional officers and superintendent, and commonwealth officials responsible for establishing and operating the program were analyzed to identify attitudes about methadone and program effectiveness. **RESULTS:** Heroin use among prisoners not in treatment was common; 58% reported any use while incarcerated and 38% reported use in past 30 days. All patients in the treatment program had used heroin in prison in the 30 days prior to enrolling in treatment. While in treatment, the percentage of patients not using heroin was reduced, according to both self-report and urine testing, to one in 18 (94% reduction) and one in 20 (95% reduction), respectively. Participation in treatment was associated with an increased acceptance of methadone maintenance. Prison personnel and commonwealth officials were supportive of the program. **CONCLUSIONS:** The program appears to be a success, and prison officials have begun an expansion from the current ceiling of 24 inmates to treat 300 or more inmates.

[49. Ethn Dis. 2005 Autumn;15\(4 Suppl 5\):S5-25-9.](#)

A comparison of the sociodemographic, risk-behavior, and substance-abuse profile of young vs older HIV-infected Puerto Rican patients.

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INTRODUCTION: As of May 2003, 17% of all reported AIDS cases in Puerto Rico had occurred among those 20-29 years of age. These individuals were likely initially infected with HIV in adolescence. The objectives of this study are to describe and compare the prevalence of the sociodemographic, risk-behavior, and substance-use profile among patients infected with HIV during their adolescence (early) and compare them with patients infected at an older age (non-early).

METHODS: This is a cross-sectional study of 3151 HIV/AIDS patients admitted to the retrovirus research center of our institution between 1992 and 2002. The variables we studied include the presence or absence of early infection, sociodemographic variables, risk-behavior variables, and substance-use variables. An early-infected patient was defined as a patient with HIV/AIDS that reported his or her first positive HIV test result before the age of 21 years. Descriptive and differential analyses were performed. **RESULTS:** Five percent of our patients were early-infected (157/3151). A significantly higher proportion ($P < \text{or} = .05$) among the early-infected patients as compared to the older group was females, required inpatient hospital care at the time of study entry, and had less than a 12th-grade education. In the interview a significantly higher proportion had antisocial behavior, had been in prison at some point in their life, and had used crack-cocaine. **CONCLUSIONS:** The early HIV-infected patients showed a different sociodemographic, risk-behavior, and substance-use profile. Knowledge of the specific characteristics of early HIV-infected patients could be used to develop primary prevention programs directed toward reducing HIV infection among young Puerto Ricans.

[50. AIDS Behav. 2005 Sep;9\(3\):363-75.](#)

Elicitation of salient beliefs related to drug preparation practices among injection drug users in Puerto Rico.

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Even when IDUs use their own syringes, the common use of drug preparation materials can expose them to blood-borne pathogens. Notwithstanding the accumulated evidence about the riskiness of drug preparation practices (DPPs), the factors that lead IDUs to engage in DPPs have remained understudied. We conducted 80 semi-structured interviews to elicit salient beliefs about engaging in low-risk DPPs. Data were content analyzed for consequences, normative influences, and barriers. For the most part respondents described positive consequences of engaging in low-risk DPPs. The majority of respondents mentioned IDU peers as a major source of pressure to engage in high-risk DPPs. Lack of access to clean materials and the need to carry materials on oneself were the most salient barriers elicited. The results suggest that preventive interventions need to address the preference for re-using filters, help develop skills to fend off pressures from peers, and increase the accessibility of materials in ways that do not require IDUs to carry additional items.

[51. AIDS Behav. 2005 Sep;9\(3\):377-86.](#)

HIV transmission behaviors in jail/prison among puerto rican drug injectors in New York and Puerto Rico.

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This study examined HIV risk behavior in jail/prison among Puerto Rican drug injectors in New York (NY, n = 300) and Puerto Rico (PR, n = 200), and its relationship with later drug and sex risk behaviors. During 3 years prior to interview, 66% of NY and 43% of PR samples were incarcerated at least once. While incarcerated, 5% of NY and 53% of PR injected drugs. Few reported engaging in sex inside jail/prison (5% in both sites). Of those who engaged in risk behaviors in jail/prison, almost all reported having unprotected sex and sharing injection equipment. The impact of jail/prison risk behaviors on risk behaviors after release differed between the two sites: they were more related to subsequent sex risk behaviors in NY, and subsequent injection risk behaviors in PR. The findings indicate a need for effective drug treatment

programs inside jail/prisons to reduce HIV-related risk behaviors among drug injectors during incarceration and after release.

[52. J Urban Health. 2005 Sep;82\(3\):446-55. Epub 2005 May 25.](#)

Homelessness and HIV risk behaviors among drug injectors in Puerto Rico.

Reyes JC, Robles RR, Colón HM, Matos TD, Finlinson HA, Marrero CA, Shepard EW.

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This report examines associations between homelessness and HIV risk behaviors among injection drug users (IDUs) in Puerto Rico. The study sample consisted of 557 IDUs who were not in treatment, recruited in inner-city neighborhoods of the North Metro Health Care Region. Subjects were categorized into three groups by residential status (last 30 days): housed, transitionally housed (living with friends, family, or others but considering themselves homeless), and on-the-street homeless (living on the street or in a shelter). Multiple logistic regression models were fitted to assess effects of residential status on each HIV risk behavior after adjusting for sociodemographic and drug-use related covariates. Transitionally housed and on-the-street homeless subjects made up 16% of the total sample. On-the-street homeless IDUs were more likely to test positive for HIV than were transitionally housed and housed IDUs. In the adjusted analysis, on-the-street homeless subjects were significantly more likely to share needles, share rinse water, and practice back loading than the other two groups. Sexual risk behaviors (last 30 days) were not significantly associated with residential status after adjustment. Findings from this study present an added challenge to drug treatment and HIV prevention and treatment programs, to provide services that can address the additional needs of drug users suffering the stressors of homelessness.

[53. J Psychoactive Drugs. 2005 Mar;37\(1\):37-49.](#)

Injecting shared drugs: an observational study of the process of drug acquisition, preparation, and injection by Puerto Rican drug users.

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The practice of injecting shared drugs, in which drug users prepare, divide and inject portions of a drug solution, is a means of transmitting HIV, HCV, and other blood-borne pathogens. This study examined the process of injecting shared drugs among drug users in San Juan, Puerto Rico, through detailed observations of 25 episodes of the injection of shared drugs, and by informal interviewing of episode participants. The ways in which price and packaging of drugs, access to drug preparation materials, and social and economic relations between drug-sharing "partners" influence the process of injecting shared drugs are explored. Because differential power relations, and in turn, injection drug users' exposure to HIV and HCV, are apparent in some drug-sharing partnerships, a key objective of this study was to extend our understanding of contributions or "investments" made by different drug-sharing partners, the benefits and costs that different partners experience, and the extent to which IDUs assume different partner roles. The findings of this small, in-depth qualitative study provide insight into drug users' motivations for injecting shared drugs, and suggest reasons why certain standardized, countrywide HIV/HCV intervention efforts have not been entirely successful in preventing the devastating illnesses that disproportionately affect injection drug users.

[54. AIDS Educ Prev. 2005 Feb;17\(1\):53-67.](#)

Egocentric HIV risk networks among Puerto Rican crack users in New York and in Puerto Rico: impact on sex risk behaviors over time.

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This study examined risk network characteristics of Puerto Rican crack users and the relationship between the network and HIV-related sex risk behavior over time. The participants (N = 383 in New York; N = 165 in Puerto Rico), recruited through street outreach, were interviewed at both baseline and 6-month follow-up. The majority of crack users (88%, New York; 92%, Puerto Rico) in the sample named one or more personal risk network members. As compared with New York participants, crack users in Puerto Rico reported larger risk networks and were more likely to engage in sex risk

behaviors with strangers or acquaintances. In multivariate analyses, a significant variable in predicting sex risk behaviors at follow-up in both sites was the baseline measure of the dependent variable. Significant network variables were: having any known crack use member less than 6 months and having acquaintance/stranger in network in New York; communicating with network members about using condoms in Puerto Rico. More attention to sex risk behaviors are needed in HIV/AIDS prevention and education programs.

[55. Am J Public Health. 2005 Apr;95\(4\):696-702.](#)

The epidemiology of alcohol, marijuana, and cocaine use among Mexican American, Puerto Rican, Cuban American, and other Latin American eighth-grade students in the United States: 1991-2002.

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Comment in Am J Public Health. 2005 Sep;95(9):1494; author reply 1494-5.

OBJECTIVES: We compared trends in and correlates of marijuana use, cocaine use, and heavy alcohol use for adolescents of Mexican American, Puerto Rican, Cuban, and other Latin American heritage in the United States. **METHODS:** We used/examined data from nationally representative samples of eighth-grade Hispanic students who participated in the Monitoring the Future study during the years 1991-2002 (n=24235). **RESULTS:** Drug use was significantly higher among boys and adolescents of almost all Hispanic ethnicities who did not live with both parents. In addition, drug use differed considerably according to ethnic group on language first spoken, parental education, urbanicity, and region.

CONCLUSIONS: A better understanding of the homogeneity and heterogeneity of drug use patterns within and between Hispanic groups should assist in the development of prevention programs.

[56. Compr Psychiatry. 2005 Mar-Apr;46\(2\):140-6.](#)

Discriminant efficiency of antisocial and borderline personality disorder criteria in Hispanic men with substance use disorders.

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The authors examined the discriminant efficiency of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria for borderline personality disorder (BPD) and antisocial personality disorder (APD). Subjects were 74 men admitted to an outpatient substance abuse program for monolingual Hispanic adults. All were reliably assessed with the Spanish-language version of the Diagnostic Interview for DSM-IV Personality Disorders. Conditional probabilities were calculated to determine the diagnostic efficiency and discriminant efficiency of BPD and APD symptoms. Twenty-five (34%) subjects met diagnostic criteria for BPD, and 16 (22%) met criteria for APD. The diagnostic co-occurrence of these disorders was statistically significant. Whereas the diagnostic efficiency of the BPD criterion set was comparable to that reported in other clinical studies, these criteria were not significantly more efficient in diagnosing BPD than APD. By contrast, the APD criteria were more efficient in diagnosing APD than BPD; this was true for both the "adult" and the "conduct disorder" APD criterion subsets. In male Hispanic outpatients with substance use disorders, BPD and APD show significant diagnostic overlap. The APD criteria are useful in discriminating these 2 disorders, whereas the BPD criteria are not. These findings have implications for the discriminant validity of the BPD and APD criteria and support the value of the conduct disorder criteria in predicting APD in adulthood.

[57. P R Health Sci J. 2004 Sep;23\(3\):217-22.](#)

Accessing hard-to-reach populations: the illicit drug market as a workplace of the outreach worker in Puerto Rico.

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This descriptive paper reports findings from a formative research study on the drug market as a workplace of the outreach worker in Puerto Rico, and outlines strategies used by outreach workers to enable them to work effectively in these sites. Data were collected via outreach worker focus groups and participant observations at drug market sites. A

social system theoretical model was used for analyzing data on drug market sites, and results are reported in terms of three basic social system components: structure, culture, and process. The authors recommend utilizing outreach workers as part of prevention and treatment teams in organizations providing services to drug users, as well as other hard-to-reach populations such as street sex workers and the homeless.

[58. *Addict Behav.* 2005 Feb;30\(2\):397-402.](#)

Factors associated with drug treatment dropout among injection drug users in Puerto Rico.

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This study examined factors associated with drug treatment dropout among injection drug users (IDUs) in Puerto Rico, a group that has contributed significantly to the self-sustaining AIDS epidemic in the island since the mid-1980s. A total of 557 IDUs were recruited from communities in a semirural region of Puerto Rico, as part of a longitudinal study testing the efficacy of a two-facet intervention model, based on motivational interviewing. Of 124 IDUs who had entered drug treatment at follow-up, 33 (26.6%) dropped out before completing all recommended sessions. Multiple logistic regression analysis showed that age, homelessness, and speedball use were significantly associated with drug treatment dropout. Conversely, participants who received the two-facet intervention were significantly less likely to drop out of drug treatment. Receiving psychiatric services also reduced the odds of treatment dropout. Improving adherence to drug treatment and reducing dropout rates are complex processes that need to be addressed at the individual behavioral and social support levels, as well as the program process and resource levels.

[59. *Med Care.* 2004 Nov;42\(11\):1117-24.](#)

Drug treatment, health, and social service utilization by substance abusing women from a community-based sample.

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BACKGROUND: Substance abuse is an escalating problem among poor urban Latina women; little is known about their access to drug treatment and to needed social and health services. **OBJECTIVE:** Our objectives were to (1) examine the need and use of substance abuse treatment, health services, government entitlement programs, and social service programs among cocaine and heroin using Puerto Rican women and (2) identify whether service use predicts their prospective entry into drug treatment. **RESEARCH DESIGN:** This was a 3-wave longitudinal study of community substance abusing women evaluated on substance abuse and dependence using diagnostic measures, and hair and urine toxicological screens. Information was collected on self-reported need and receipt of substance abuse treatment, social services, general health services, and government entitlement programs. **SUBJECTS:** A community sample of cocaine-, crack-, and/or heroin-using women from copping areas in low-income urban centers of Puerto Rico were interviewed in 1997-1998 with 2 follow-up periods. **RESULTS:** Drug treatment, health, and social service utilization were low relative to need for services throughout all data waves. Social service utilization predicted prospective entry into drug treatment but not contacts with general health services or government entitlement programs. **CONCLUSION:** Drug-abusing women in low-income urban areas in Puerto Rico have substantial unmet substance abuse treatment, health, and social service needs. Mandated treatment by social service agencies may explain their clients' higher likelihood of entering drug treatment. Building linkages between service sectors to augment entry into drug treatment is essential for meeting the complex needs of this underserved population.

[60. *Drug Alcohol Depend.* 2004 Dec 7;76\(3\):229-34.](#)

HIV risk behaviors and alcohol intoxication among injection drug users in Puerto Rico.

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This paper reports results of an analysis of the association between alcohol intoxication and injection and sexual HIV risk behaviors among 557 Hispanic heroin and cocaine injectors, not in treatment, who were recruited in poor communities

in Puerto Rico. Subjects were part of a longitudinal prevention-intervention study aimed at reducing drug use and HIV risk behaviors. Participants reported a high prevalence of co-occurring conditions, particularly symptoms of severe depression (52%) and severe anxiety (37%), measured by Beck's Depression Index and Beck's Anxiety Index, respectively. Alcohol intoxication during the last 30 days was reported by 18% of participants. Associations were found between alcohol intoxication and both injection and sexual risk behaviors. In the bivariate analysis, subjects reporting alcohol intoxication were more likely to inject three or more times per day, pool money to buy drugs, share needles, and share cotton. They were also significantly more likely to have a casual or paying sex partner and to have unprotected sex with these partners. After adjustment, sharing needles and cotton, having sex with a paying partner or casual partner, and exchanging sex for money or drugs were significantly related to alcohol intoxication. HIV prevention programs, to be effective, must address alcohol intoxication and its relation to injection and sexual risk behaviors as a central issue in HIV prevention among drug injectors.

[61. Arch Gen Psychiatry. 2004 Oct;61\(10\):1034-41.](#)

Remission from drug dependence symptoms and drug use cessation among women drug users in puerto rico.

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BACKGROUND: Studies of remission from drug dependence have most often been based on treatment samples, with limited generalizability to persons who may benefit from but never seek substance abuse treatment. Little is known about remission patterns among drug users in the community. **OBJECTIVE:** To identify patterns and predictors of remission in a community sample of drug users followed up prospectively. **DESIGN:** Three waves of data on a range of individual and interpersonal correlates of drug abuse and health care service use were collected between April 1997 and October 2000. **SETTING:** Areas of metropolitan San Juan where drug sales were known to occur. **PARTICIPANTS:** Two hundred seventy-five women aged 18 to 35 who were crack cocaine or injecting drug users. **MAIN OUTCOME MEASURES:** Self-reported drug use validated with urine screens and drug use dependence criteria based on the DSM-IV. **RESULTS:** Most (86.9%) of the women were drug dependent at baseline. By wave 3, fewer than half (42.6%) of the women were dependent, 13.8% had subthreshold disorder, and 17.8% used substances but did not endorse any dependence criteria. Cessation of use and decreases in the number of dependence criteria endorsed were significantly less likely for women with depressive symptoms (odds ratio [OR], 0.92; 95% confidence interval [CI], 0.88-0.96; and OR, 0.88; 95% CI, 0.86-0.90; respectively), with a partner who engaged in criminal activities (OR, 0.30; 95% CI, 0.16-0.58; and OR, 0.63; 95% CI, 0.46-0.85; respectively), and who traded sex for money or drugs (OR, 0.12; 95% CI, 0.05-0.29; and OR, 0.26; 95% CI, 0.19-0.35; respectively). **CONCLUSIONS:** Drug use patterns and rates of dependence fluctuated substantially over time among drug users recruited from the community. Findings regarding the characteristics that impede remission suggest that mental health practitioners have an important role to play in community-based outreach and interventions designed to support women's efforts to stop using drugs.

[62. Addict Behav. 2004 Nov;29\(8\):1659-64.](#)

Substance use among school-based youths in Puerto Rico: differences between gender and grade levels.

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The present study examined substance use rates among adolescents in Grades 7-12 in Puerto Rico. Nine hundred eighty-nine students completed the Spanish version of the International Survey of Adolescent Health. More than 50% of middle school youths and 75% of high-school youths reported lifetime alcohol use. Female gender was associated with tobacco use in middle school while male gender was associated with marijuana use in high school. High-school females reported lower rates of tobacco use and marijuana use than middle-school females. High-school males exhibited substantially higher drug-use rates than middle-school males for each substance. These findings may suggest that universal drug prevention interventions may be needed for females in Puerto Rico before they enter middle school, while targeted interventions aimed at high-risk females who continue to smoke tobacco or marijuana may be more effective during high school. In contrast, targeted drug prevention interventions for males probably need to begin in middle school and be maintained if not increased in intensity throughout the high-school years.

[63. J Subst Abuse Treat. 2004 Sep;27\(2\):145-52.](#)

Effects of combined counseling and case management to reduce HIV risk behaviors among Hispanic drug injectors in Puerto Rico: a randomized controlled study.

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This study examined the effectiveness of a combined counseling and case management behavioral intervention, using motivational interviewing strategies, in engaging Hispanic injection drug users in treatment and reducing drug use and injection-related HIV risk behaviors. Follow up data are presented on 440 (79.0%) of 557 randomized participants, 6 months after the initial interview. Subjects in the experimental arm were significantly less likely to continue drug injection independent of entering drug treatment, and were also more likely to enter drug treatment. Subjects in both arms who entered drug treatment were less likely to continue drug injection. Among subjects who continued drug injection, those in the experimental arm were significantly less likely to share needles. Confirming the outcomes of this study in other Hispanic sites and populations could be a critical step towards reducing factors that contribute to the self-sustaining HIV/AIDS epidemic in Puerto Rico and communities in the U.S. mainland.

[64. J Genet Psychol. 2004 Sep;165\(3\):324-40.](#)

Smoking among New Yorican adolescents: time 1 predictors of time 2 tobacco use.

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The authors identified longitudinal relationships between early risk and protective factors from the domains of family, personality, and peer influences and later tobacco use in Puerto Rican adolescents living in New York. Aspects of the ethnic minority experience as moderators of familial risk and protective factors were investigated. Participants were 282 female and 276 male Puerto Rican adolescents interviewed twice, 5 years apart. The authors used hierarchical regression analyses to identify a model with direct and indirect paths. Family, personality, peer, and early smoking domains were directly related to later adolescent smoking. Partial mediation occurred. The authors identified risk-protective and protective-protective interactions between variables from the ethnic minority experience and family domains. Interventions to reduce smoking among Puerto Rican adolescents should focus on multiple contexts, including aspects of the ethnic minority experience.

[65. Addiction. 2004 Sep;99\(9\):1147-56.](#)

Changing profiles of injecting drug users with AIDS in a Hispanic population.

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AIMS: To describe and assess the changing trends in socio-demographic, risk, clinical and immunological parameters in male intravenous drug users (IDU) with AIDS. DESIGN, SETTING AND PARTICIPANTS: Baseline description by year of entry of 610 male IDU with AIDS who entered into a cohort study in Bayamón, Puerto Rico, from 1992 to 2000. Study participants were evaluated at in-patient health-care facilities in the University Hospital Ramón Ruiz Arnau or in the ambulatory immunology clinic facilities. FINDINGS: The median age at which subjects entered the study and the proportion of patients with an educational level lower than a high school degree increased from 1992 to 2000. Upward trends were also observed in the practice of injecting non-prescription drugs during the last 12-month period, the practice of needle sharing and the use of a combination of heroin and cocaine ('speedballs'). Higher proportions of subjects were also diagnosed with wasting syndrome and bacterial pneumonia. The median CD4 count recorded at entry decreased over the course of the study. CONCLUSIONS: Puerto Rican male IDU diagnosed with AIDS are arriving at health-care facilities in the latest stages of the disease. Better and early interventions with different health care approaches need to be developed.

[66. J Genet Psychol. 2004 Jun;165\(2\):203-20.](#)

Illicit drug use and risky sexual behavior among African American and Puerto Rican urban adolescents: the longitudinal links.

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The authors assessed whether (a) early illicit drug use predicted later risky sexual activity, (b) early risky sex predicted later illicit drug use, and (c) common factors affected both risky sexual behavior and illicit drug use. African American and Puerto Rican youth completed questionnaires in their classrooms at Time 1 (T1) and face-to-face interviews with the authors in their homes 5 years later at Time 2 (T2). Logistic regression analyses showed the association between T1 illicit drug use and T2 risky sexual activity and between T1 risky sexual behavior and T2 illicit drug use. With few exceptions, T1 illicit drug use was associated with all of the T2 risky sexual behaviors. After controlling for demographic factors, the authors found that multiple sex partners at T1 was not related to illicit drug use at T2. Condom use at T1 was related to illicit drug use at T2, whereas sexually transmitted diseases and adolescent pregnancy were not related to this drug use. The findings indicated that assessments of and treatments for substance use should focus on the risky sexual behaviors that seem to accompany illicit drug use.

[67. J Med Entomol. 2000 Jan;37\(1\):89-101.](#)

Longitudinal studies of *Aedes aegypti* (Diptera: Culicidae) in Thailand and Puerto Rico: blood feeding frequency.

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We used a histologic technique to study multiple blood feeding in a single gonotrophic cycle by engorged *Aedes aegypti* (L.) that were collected weekly for 2 yr from houses in a rural village in Thailand (n = 1,891) and a residential section of San Juan, Puerto Rico (n = 1,675). Overall, mosquitoes from Thailand contained significantly more multiple meals (n = 1,300, 42% double meals, 5% triple meals) than mosquitoes collected in Puerto Rico (n = 1,156, 32% double meals, 2% triple meals). The portion of specimens for which frequency of feeding could not be determined was 31% at both sites. We estimated that on average *Ae. aegypti* take 0.76 and 0.63 human blood meals per day in Thailand and Puerto Rico, respectively. However, frequency of multiple feeding varied among houses and, in Puerto Rico, the neighborhoods from which mosquitoes were collected. In Thailand 65% of the mosquitoes fed twice on the same day, whereas in Puerto Rico 57% took multiple meals separated by > or = 1 d. At both sites, the majority of engorged specimens were collected inside houses (Thailand 86%, Puerto Rico 95%). The number of blood meals detected was independent of where mosquitoes were collected (inside versus outside of the house) at both sites and the time of day collections were made in Puerto Rico. Feeding rates were slightly higher for mosquitoes collected in the afternoon in Thailand. Temperatures were significantly higher and mosquitoes significantly smaller in Thailand than in Puerto Rico. At both sites female size was negatively associated with temperature. Rates of multiple feeding were associated positively with temperature and negatively with mosquito size in Thailand, but not in Puerto Rico. Multiple feeding during a single gonotrophic cycle is a regular part of *Ae. aegypti* biology, can vary geographically and under different climate conditions, and may be associated with variation in patterns of dengue virus transmission.

[68. JAMA. 2004 Jun 16;291\(23\):2882.](#)

STUDENTJAMA. Faith-based treatment for addiction in Puerto Rico.

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[69. J Subst Abuse Treat. 2004 Jun;26\(4\):277-84.](#)

Heterogeneity among Latinas and Latinos entering substance abuse treatment: findings from a national database.

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The current study examined differences in 30-day and lifetime substance use for a sample of Mexican American, Puerto Rican, and Cuban American men and women from the Drug Evaluation Network System, a national database on individuals seeking substance abuse treatment. There were significant gender and ethnic differences in recent and

lifetime substance use after controlling for age, years of education, employment, medical, and psychological problems. Lifetime and 30-day substance use rates found in this study do not coincide with prevalence rates found in community samples of Latinas/os, indicating that the patterns of substance use may be different among individuals who seek substance abuse treatment than among those in the general population. The results of this study highlight the heterogeneity of Latinas/os who abuse substances.

[70. *Addict Behav.* 2004 Jun;29\(4\):643-64.](#)

Understanding hard-core drug use among urban Puerto Rican women in high-risk neighborhoods.

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The objectives of the current study were to determine the incidence and prevalence of hard-core drug (HCD) use and to explore the predictors of HCD use in a three-wave longitudinal study of women ages 18-35 living in urban areas of high drug traffic in Puerto Rico. Prevalence of HCD use was determined by positive self-report or positive toxicological tests for crack, cocaine, or heroine at baseline and follow-up periods. Incidence density was calculated using Poisson methods. Predictors of HCD use were identified using the generalized estimating equation (GEE) approach. Prevalence rates fluctuated between 16.3 at baseline and 12.6 and 14.6 at subsequent waves. Incidence of crack/cocaine or heroine ranged from 7.4 to 6.3 per 100 person years. Low education, unemployment, current alcohol use, and severe partner violence predict incident HCD use. Therefore, prevention programs for HCD use must consider strategies to promote social mobility and empowerment and to mitigate violence against women.

[71. *P R Health Sci J.* 2003 Dec;22\(4\):369-76.](#)

Mortality among Hispanic drug users in Puerto Rico.

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This paper assesses mortality rate for a cohort of drug users in Puerto Rico compared with that of the Island's general population, examining causes of death and estimating relative risk of death. Date and cause of death were obtained from death certificates during 1998. Vital status was confirmed through contact with subjects, family, and friends. HIV/AIDS was the major cause of death (47.7%), followed by homicide (14.6%), and accidental poisoning (6.3%). Females had higher relative risk of death than males in all age categories. Not living with a sex partner and not receiving drug treatment were related to higher mortality due to HIV/AIDS. Drug injection was the only variable explaining relative risk of death due to overdose. Puerto Rico needs to continue developing programs to prevent HIV/AIDS among drug users. Special attention should be given to young women, who appear to be in greatest need of programs to prevent early mortality.

[72. *AIDS Behav.* 2003 Dec;7\(4\):405-12.](#)

The utility of the PRECEDE model in predicting HIV risk behaviors among Puerto Rican injection drug users.

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The PRECEDE model for health promotion proposes three types of influences on health behaviors: Predisposing, Enabling, and Reinforcing factors. This model was used to examine a range of influences on HIV risk behaviors (sharing syringes and other injection-related paraphernalia) among Puerto Rican injection drug users (IDUs). A total of 698 IDUs were interviewed (438 in East Harlem, New York, and 260 in Bayamón, Puerto Rico). Both types of risk behaviors were more prevalent in Puerto Rico. Similarities in influences on syringe sharing behaviors were found in the two sites and included self-efficacy (for reducing injection-related sharing) and norms. Influences on the sharing of other injection-related paraphernalia were primarily Enabling factors in both communities, and purchasing drugs with others was the strongest predictor of paraphernalia sharing. The need to address risks associated with joint drug purchasing in both locations and to enhance efforts to reduce risks among IDUs in Puerto Rico is indicated.

[73. AIDS Behav. 2003 Dec;7\(4\):339-51.](#)

Perspectives related to the potential use of vaginal microbicides among drug-involved women: focus groups in three cities in the United States and Puerto Rico.

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HIV transmission through heterosexual contact remains the greatest risk factor for women globally. Topical microbicides applied intravaginally may offer a female-initiated HIV prevention option for many who are unable or unwilling to use male condoms or who would want additional protection. This article presents results of focus groups in Bridgeport, Connecticut, Providence, Rhode Island, and San Juan, Puerto Rico, with women who use crack or heroin or have male partners who inject illegal drugs. Participants revealed motivation for and openness to using microbicides effective against HIV should they become available. Additional lubrication during intercourse was one of several expected positive features of microbicides; women saw lubrication as a means of enhancing pleasure and reducing condom irritation and breakage while also protecting them from infection. Conversely, some women feared that their male partners would interpret excessive lubrication as an indication of infection, improper hygiene, or evidence of sex with another man. Focus groups also provided insight into how aspects of different women's sexual lives, including partner type, might influence the issues that would concern them if and when they tried out new microbicial products in the future.

[74. Clin Infect Dis. 2003 Dec 15;37 Suppl 5:S392-403.](#)

Determinants of health care use among Puerto Rican drug users in Puerto Rico and New York City.

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This study was conducted to identify factors accounting for differences in health care and drug treatment utilization between Puerto Rican drug users residing in 2 separate locations. Survey findings from 334 drug users in Puerto Rico and 617 in New York City showed that those in Puerto Rico were 6 times less likely than their counterparts in New York to have used inpatient medical services and 13 to 14 times less likely to have used outpatient medical services or methadone. They also were less likely to have health insurance or past drug treatment. After site was controlled for, health insurance and previous use of physical or mental health services remained significant predictors of health care and drug treatment utilization during the study period. Although Puerto Rican drug users in Puerto Rico are not an ethnic minority, they reported significant disparities in health services use compared with Puerto Rican drug users in New York.

[75. J Sex Res. 2003 Aug;40\(3\):277-85.](#)

Puerto Rican drug users experiences of physical and sexual abuse: comparisons based on sexual identities.

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This study integrates the results of quantitative and qualitative methods to elucidate the association between sexual identity and physical and sexual abuse among Puerto Rican drug users. A structured questionnaire was administered to 800 subjects in New York and 399 in Puerto Rico. A total of 93 subjects (7.9%) self-identified as homosexual or bisexual. Gay males were significantly more likely than heterosexual males to report first occurrence of physical abuse by a family member in childhood. Both gay and bisexual males were more likely than their heterosexual counterparts to report first experiencing unwanted sex in childhood and intimate partner physical abuse later in life. Lesbians were more likely than female heterosexuals to report unwanted sex in childhood. Qualitative data were collected through in-depth life histories with 21 subjects and suggest that gay and lesbian subjects perceive antihomosexual prejudice on the part of family members as one cause of childhood physical and sexual abuse.

[76. J Psychoactive Drugs. 2003 Apr-Jun;35\(2\):197-207.](#)

The use of the Puerto Rican Biculturalism Scale with Puerto Rican drug users in New York and Puerto Rico.

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This study examines the psychometric properties of an acculturation scale specifically developed for Puerto Ricans with a sample of substance abusers residing in Puerto Rico and New York. In line with current conceptual models of acculturation, this instrument departs from a mutually exclusive or zero-sum conceptualization of acculturation by assessing involvement in both American and Puerto Rican cultures independently of each other. Findings from this study permitted comparisons of acculturation as experienced by Puerto Rican injection drug users in Puerto Rico and New York. Results supported the notion of independence of individuals' involvement in American and Puerto Rican cultures, thus confirming the complex nature of biculturalism. This article also examines the relevance of the study of acculturation scales that can assist in identifying the influences of the cultures of origin and destination on substance abuse and HIV risk behaviors.

[77. Am J Trop Med Hyg. 2003 Apr;68\(4\):437-46.](#)

Identification of the people from whom engorged *Aedes aegypti* took blood meals in Florida, Puerto Rico, using polymerase chain reaction-based DNA profiling.

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We used polymerase chain reaction-based DNA profiling to construct allelic profiles for residents and visitors of 22 houses in Florida, Puerto Rico, and human DNA from blood meals in *Aedes aegypti* that were collected in those homes. Complete profiles were obtained for < or = 2 days after blood ingestion. Eighteen percent of the meals came from two different people. There was no evidence of meals from > or = 2 people. Eighty percent of the meal sources were identified, > 70% were taken from residents of the collection house, and > 90% were from residents of the study community. Across the community, feeding was non-random with a bias towards young adults and males. Three people accounted for 56% of the meals. Our results confirm that multiple feeding on different people is an important component in the role of *Ae. aegypti* in dengue virus transmission and help explain the spatial distribution of dengue cases in a previous epidemic in Florida, Puerto Rico.

[78. P R Health Sci J. 2003 Jun;22\(2\):153-9.](#)

The association of lead-contaminated house dust and blood lead levels of children living on a former landfill in Puerto Rico.

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Exposure to lead in children living on a former landfill in Vega Baja-Puerto Rico, a United States Environmental Protection Agency (USEPA) designated Superfund Site, is a major health concern. Direct contact with lead-contaminated soil is considered a major exposure source. However, there is a lack of information regarding the contribution of lead-contaminated house dust to children's blood lead concentrations. This study evaluated the relationship between lead contaminated-house dust and children's blood lead levels. Blood from 42 children, aged 6 years old or less, and dust from 29 houses were analyzed for lead, and face-to-face interviews were performed to gather information on potential risk factors for high blood lead levels. Blood lead levels ranged from 0.97 to 7.79 micrograms/dL. Lead values for floors fluctuated from 0.12 to 98.30 micrograms/ft², with 17% of houses surpassing the USEPA standard of 40 micrograms/ft². Multiple regression analysis showed that lead in window sills, toy chewing and soil eating habits were significant predictors of blood lead levels. Further investigations aimed at assessing the long-term effects of constant exposure to environmental lead in these children are warranted.

[79. Bol Asoc Med P R. 2001 Jan-Dec;93\(1-12\):12-22.](#)

Prevalence and correlates of DSM-IV substance use disorders in Puerto Rico.

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We report the basic findings of a survey aimed at estimating rates of substance disorders in a probability sample of 4,709 household residents aged 15 to 64 years old. Lifetime use of alcohol was reported by 77.2%, and 10.7% reported ever using illicit drugs. Overall, 14.7% of the sample met criteria for a lifetime substance disorder, and 4.9% for a past year disorder. The rates of lifetime disorders were 13.1% for alcohol and 4.1% for illicit drug. Past year abuse/dependence was 4.3% for alcohol and 1.3% for illicit drugs. Alcohol use disorders were associated with male gender, higher family annual income, being employed, and being married. Illicit drug use disorders were associated with male gender and younger age. Only 13.0% of respondents with a past year disorder reported using services for their disorder. A program of continuous monitoring of substance using disorders is critical to establishing and monitoring effective policies.

[80. P R Health Sci J. 2003 Mar;22\(1\):49-59.](#)

[War on Drugs or War against Health? The pitfalls for public health of Puerto Rican drug policy].

[Article in Spanish]

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Puerto Rico has followed the United States in adopting drug policy sustained on a criminal justice model that limits the opportunities to address problematic drug use through public health interventions. Demand for illegal drugs is controlled by criminalizing drug use and applying jail sentences for drug offenses. These strategies marginalize drug users and reduce opportunities to minimize health risks applying public health measures. Production and sale of illegal drugs is criminalized with the intent of dissuading drug use, with adverse unintended health effects that impact both drug users and non-drug users in the community. The present work reviews the assumptions of the punitive prohibitionist model and its outcomes that present themselves as public health challenges in Puerto Rico. It also presents those principles that should sustain pragmatic drug policy to address problematic drug use from a health and social perspective.

[81. Am J Public Health. 2003 May;93\(5\):812-6.](#)

Migration and HIV risk behaviors: Puerto Rican drug injectors in New York City and Puerto Rico.

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OBJECTIVES: We compared injection-related HIV risk behaviors of Puerto Rican current injection drug users (IDUs) living in New York City and in Puerto Rico who also had injected in the other location with those who had not. **METHODS:** We recruited Puerto Rican IDUs in New York City (n = 561) and in Puerto Rico (n = 312). Of the former, 39% were "newcomers," having previously injected in Puerto Rico; of the latter, 14% were "returnees," having previously injected in New York. We compared risk behaviors within each sample between those with and without experience injecting in the other location. **RESULTS:** Newcomers reported higher levels of risk behaviors than other New York IDUs. Newcomer status (adjusted odds ratio [OR] = 1.62) and homelessness (adjusted OR = 2.52) were significant predictors of "shooting gallery" use; newcomer status also predicted paraphernalia sharing (adjusted OR = 1.67). Returnee status was not related to these variables. **CONCLUSIONS:** Intervention services are needed that target mobile populations who are coming from an environment of high-risk behavior to one of low-risk behavior.

[82. Subst Use Misuse. 2003 Jan;38\(1\):1-24.](#)

Integrating qualitative and quantitative methods: comparing HIV-related risk behaviors among Puerto Rican drug users in Puerto Rico and New York.

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A dual site project was conducted to assess determinants of injection and sex-related risk behaviors among Puerto Rican drug users. The project focused on injection drug users and crack smokers, and was conducted in East Harlem, NY and

Bayamón, PR in 1996-2000. Qualitative methods included ethnographic mapping, focus groups, in-depth interviews, and observations. A survey component (East Harlem, n = 800; Bayamón, n = 400) was also conducted. Procedures to ensure integration of methodologies and comparability of data were developed. This paper describes the qualitative and survey methods used, and presents the comparative HIV risk behaviors. The integration of the two methodologies served multiple functions: each component identified issues to be addressed in the other, enhanced cross-site comparability of data, and assisted in interpretation of findings. The survey data showed high levels of risk behaviors in both communities, with significantly higher levels of risk reported in Bayamón. Conducting studies of similar ethnic groups in different communities provides opportunities to examine diverse sources of influence on risk behaviors. The integration of qualitative and quantitative methods can enhance comparability and understanding of findings, particularly when there are differences in behaviors between communities.

[83. J Psychoactive Drugs. 2002 Oct-Dec;34\(4\):363-9.](#)

Drug-scene roles and HIV risk among Puerto Rican injection drug users in East Harlem, New York and Bayamón, Puerto Rico.

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This article describes and compares distributions of drug-scene roles, frequency of engaging in role behaviors, and relationships of role-holding to high-risk behaviors and sexual partnerships among Puerto Rican injection drug users in New York and Puerto Rico. For this study 561 street-recruited injection drug users in East Harlem, New York, and 312 in Bayamón, Puerto Rico were asked the number of days (in the last 30) in which they earned money or drugs in each of seven drug-scene roles; and about behaviors and egocentric risk partner characteristics in the last 30 days. East Harlem subjects were more likely to get resources by selling drugs and syringes, and buying drugs for someone else; Bayamón subjects were more likely to be "hit doctors," buy needles for others, operate a shooting gallery, or escort others to shooting galleries. All roles were part-time except shooting gallery management in East Harlem. About 27% of respondents at each site engaged in two or more roles. Many roles were associated with increased odds of injecting more than twice a day, receptive syringe sharing, distributive syringe sharing, receptive paraphernalia sharing, and having a drug-injecting sex partner. Drug-scene role structures vary between cities. Most roles are part-time pursuits. Role-holders have higher-risk behaviors and sexual partnerships than other drug injectors. Although further research is needed, drug-scene role-holders should be targeted for interventions to affect their own risk and their communications with others.

[84. Public Health Rep. 2002;117 Suppl 1:S67-75.](#)

Tobacco, alcohol, and illicit drug use: racial and ethnic differences among U.S. high school seniors, 1976-2000.

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OBJECTIVE: This study examines differences in adolescents' use of tobacco, alcohol, and illicit drugs by racial and ethnic groups. **METHODS:** The authors analyzed questionnaire data from large, nationally representative samples of U.S. high school seniors to examine differences in drug use prevalence and trends among racial and ethnic groups between 1976 and 2000. **RESULTS:** On average, American Indian seniors showed the highest levels of tobacco, alcohol, and illicit drug use. Cuban American and white seniors also tended to have relatively high levels of substance use, followed by Mexican American and Puerto Rican seniors. Other Latin American, African American, and Asian American seniors reported the lowest levels of drug use. Most of these differences are longstanding, but some have widened and others narrowed during the past 25 years. **CONCLUSION:** Significant differences exist in adolescent use of tobacco, alcohol, and illicit drugs by racial and ethnic groups, and these differences have changed over time. Future research should examine these differences and seek to identify the sources and consequences of the disparities.

[85. Drug Alcohol Depend. 2002 Aug 1;67\(3\):269-79.](#)

The validity of drug use self-reports among hard core drug users in a household survey in Puerto Rico: comparison of survey responses of cocaine and heroin use with hair tests.

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The extent to which underreporting of drug use in household surveys affects the validity of epidemiological studies of drug use disorders is largely unknown. We developed a list of known hard core drug users as part of a larger household study in Puerto Rico. The known drug users were recruited and interviewed with the same procedures used for the respondents selected through area-probability sampling. Upon completion of the interview, subjects were asked to provide a sample of scalp hair. A total of 78 hair specimens were collected from the known drug users. Hair specimens were screened for cocaine and heroin using radio immunoassay, and confirmed using gas chromatography/mass spectrometry. Using the cutoff of 0.2 ng/mg of hair, 93.2% of the hair specimens were classified positive for cocaine and 75.7% for heroin. With the hair test results as the gold-standard, we calculated specificity and sensitivity statistics as measures of the validity of self-reports. Self-reports of drug use in the past 3 months had a specificity of 78% or higher for both drugs. The sensitivity of self-reports was 69.6% for reports of recent cocaine use and 78.6% for reports of recent heroin use. Sensitivity increased with reports of use in more remote time periods, among subjects reporting DSM-IV drug disorder symptoms, and among those reporting use of both drugs. The results suggest that while drug reports of hard core drug users interviewed in household surveys might be more valid than those of the general population, there still remains considerable under-reporting.

[86. South Med J. 2002 Jun;95\(6\):627-33.](#)

Recommendations for prevention and management of fire ant infestation of health care facilities.

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The range of imported fire ants now includes most of the southeastern United States, parts of the Southwest, portions of the East and West Coasts, and Puerto Rico. Increasingly, fire ant attacks on patients in health care facilities have been reported. In this paper, we provide recommendations for fire ant control in and around health care facilities that should help prevent building infestation and further attacks. In addition, we provide algorithms detailing fire ant prevention strategies (indoors and outdoors) and patient management after fire ant stings. Physicians in areas endemic for fire ants should be aware of the possibility that patients may be harmed by these insects, and also should be generally familiar with measures used to control fire ants.

[87. Psychol Med. 2002 Jan;32\(1\):79-91.](#)

Early adolescent marijuana use: risks for the transition to young adulthood.

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BACKGROUND: This study assessed the relationship of early adolescent marijuana use to performance of developmental tasks integral to the transition to young adulthood. The tasks concerned intimacy, education, and work and social conformity. **METHODS:** African American (N = 617) and Puerto Rican (N = 531) youths completed questionnaires in their classrooms. Five years later they were individually interviewed. Logistic regression analysis estimated the increased likelihood that early marijuana users would make an inadequate transition to young adult social roles. **RESULTS:** Analyses examining the association between early marijuana use and 20 outcome variables found significant relationships for 10 of them: (a) having lower educational and occupational expectations; (b) being suspended or expelled from school, fired from jobs, 'high' at school or work, collecting welfare; and (c) rebelliousness, not participating in productive activities, not attending church, and being an unmarried parent. Marijuana use was not related to any of the intimate relationship measures. These findings emerged with controls on gender, ethnicity, age and mother's education. **CONCLUSIONS:** Among African Americans and Puerto Ricans, early marijuana use predicts less adequate performance on some developmental tasks integral to becoming an independent young adult. Marijuana is not a benign drug and is associated with future risks for the individual and society at large.

[88. Cell Mol Biol \(Noisy-le-grand\). 2001 Nov;47\(7\):1121-7.](#)

Survival of AIDS according to injecting drug use among Puerto Rican AIDS patients.

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This paper aims to: 1/ describe IDU's and non-IDU's according to age, gender, AIDS criteria and antiretroviral therapy; and 2/ assess survival differences between IDU's and non-IDU's according to age, gender, AIDS diagnosis criteria and antiretroviral therapy. This study is a survival study of a longitudinal cohort. The sample was composed of 1,258 AIDS patients of a cohort of HIV-infected adults who sought medical care at either the Immunology clinic of Bayamón or the Ramon Ruiz Arnau University Hospital between 1992 and 1999. The variables studied were: survival time of AIDS, intravenous drug use, age, gender, AIDS defining criteria and antiretroviral therapy (yes/no). The results have been that IDU's had lower survival than non-IDU's. Significant differences in the survival functions (IDU's vs non-IDU's) were found among male patients, older patients, patients with immunological criteria and patients with antiretroviral therapy. The survival among these variables was lower in IDU's than non-IDU's. This study suggested that decreased survival of IDU's may be related to later diagnosis and decreased access to drug therapy. Clinical endeavors should take into consideration the variables related to IDU's survival to develop health programs in order to enhance the quality of life and the survival of the AIDS patients.

[89. Cell Mol Biol \(Noisy-le-grand\). 2001 Sep;47\(6\):1017-24.](#)

HCV genotype analysis in HCV-HIV-co-infected Puerto Ricans who are injecting drug users: undetermined and mixed infections.

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Direct percutaneous exposure is the main route of HCV transmission. In Puerto Rico half of people infected with HIV use illicit drugs. The effects of HCV in the course of HIV infection and vice versa have been extensively studied, but remain highly controversial. This may be due to HCV genetic heterogeneity. Therefore, a complex classification into genotypes has emerged that prompted us to determine how this impacts a population of intravenous drug users (IDUs) co-infected with HIV-1. Using Inno-LiPa II technique, we analyzed samples from 171 HCV-HIV-1-co-infected IDUs and 375 from a general HCV population of unknown HIV or source of infection status. Similar HCV genotype distribution was detected in these populations. HCV genotype 1a was the most frequently in IDUs-co-infected with HIV-1, followed by 1b and 3a. Twenty mixed infections and 5 undetermined genotypes were reported. A reduced HCV viral load was observed in HIV-1 positives with wasting syndrome. Individuals with a high HIV-1 viral load presented a low HCV viral load. There were no correlation between HCV genotypes and AIDS-related event. Patients with genotype 1b showed a higher HCV viral load. Males presented higher HCV viral load than females. Females were predominantly affected by genotype 1a, and men by 1a and 1b. Neither the HCV viral load nor the frequency of genotypes were influenced by the antiretroviral modality. The importance of continuous genotype monitoring is stressed.

[90. Am J Drug Alcohol Abuse. 2001 Nov;27\(4\):719-35.](#)

Residential status and HIV risk behaviors among Puerto Rican drug injectors in New York and Puerto Rico.

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This article investigates the association between residential status and human immunodeficiency virus (HIV) risk behaviors among island and New York Puerto Rican injection drug users (IDUs). We assigned 561 subjects from New York City and 312 from Puerto Rico to five residential status categories: living in parent's home, living in own home, living in other's home, living in temporary housing (hotel, single-room occupancy [SRO] hotels), and homeless (living in streets/shelters). Dependent variables included injection- and sex-related risk behaviors (sharing syringes, sharing other injection paraphernalia, shooting gallery use, and having paid sex). Chi square, t tests, and multivariate logistic analysis tests were performed separately by site. About one-quarter of the sample in each site was homeless. Island Puerto

Ricans were more likely to live with their parents (44% vs. 12%, $p < .001$), and more New York IDUs lived in their own home (30% vs. 14%, $p < .001$). In New York, gallery use and paid sex were associated with living in other's home, living in parent's home, and being homeless. Sharing paraphernalia was related to living in other's home, living in temporary housing, and being homeless. In Puerto Rico, having paid sex was associated with homelessness. High-risk behaviors were more likely among homeless IDUs in both sites. Programs to provide housing and target outreach and other prevention programs for homeless IDUs would be helpful in reducing HIV risk.

[91. Int J Epidemiol. 2001 Oct;30\(5\):1042-9.](#)

The validity of drug use responses in a household survey in Puerto Rico: comparison of survey responses of cocaine and heroin use with hair tests.

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BACKGROUND: Despite the widespread use of household surveys to assess the epidemiology of illicit drug use and abuse, there is very little information about the willingness of respondents to disclose their use of drugs in household studies outside the US. **METHODS:** As part of a household study of substance use disorders in Puerto Rico, we collected hair specimens from a sub-sample of 114 respondents. Hair specimens were screened using a radio immunoassay. Screened-positive specimens were confirmed using gas chromatography/mass spectrometry. **RESULTS:** Using hair-test results as the standard, specificity of self-reports was 98% or higher for both drugs. The sensitivity of all self-reports was low, although lifetime use reports had somewhat higher sensitivities. The sensitivity of self-reports of recent cocaine use was particularly low, 7.1%. The sensitivity of heroin use reports was somewhat higher, 33.3% for recent use and 66.7% for lifetime use. The estimate of recent cocaine use based on hair tests was 13.7 times the estimate generated from interview reports. For heroin use, the test-based estimate was 2.9 times the rate generated from the interview reports. A shift from the cut-off level of 0.2 ng/mg to 0.5 ng/mg had only a marginal improvement on validity, with sensitivity increasing from 7.1% to 11.1% for self-reported recent cocaine use. **CONCLUSIONS:** The results suggest that drug users, for the most part, are not willing to disclose their use of drugs in household surveys in Puerto Rico. Methods to increase the willingness of respondents to disclose their use of drugs are needed.

[92. Am J Drug Alcohol Abuse. 2001 Aug;27\(3\):501-24.](#)

Lowering HIV risk among ethnic minority drug users: comparing culturally targeted intervention to a standard intervention.

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To test the efficacy of culturally targeted acquired immunodeficiency syndrome (AIDS) prevention programs on ethnic minority street drug users, 669 African-American and Puerto Rican drug users were assigned to receive either the National Institute on Drug Abuse (NIDA) standard intervention or a culturally competent enhanced intervention in a quasi-experimental study. The standard intervention was a two-session educational program, while both the African-American and Puerto Rican enhanced interventions provided additional AIDS information in a culturally appropriate fashion. Although human immunodeficiency virus (HIV) risk behaviors, as measured by Bell's risk indices, decreased, there were no meaningful significant differences between interventions. However, participants who went into drug treatment programs showed greater reduction in HIV risk behavior. Cultural interventions may provide better outcome if they concentrate on getting participants into drug treatment.

[93. J Acquir Immune Defic Syndr. 2001 Aug 1;27\(4\):405-13.](#)

Between-city variation in frequency of injection among Puerto Rican injection drug users: East Harlem, New York, and Bayamon, Puerto Rico.

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Frequency of injection has been consistently found to be higher among Puerto Rican Injection drug users (IDUs) than among other groups of IDUs. Several explanations have been suggested, but an empirical explanation has yet to be presented. This study compares the frequency of injection of Puerto Rican IDUs in East Harlem, New York, with that of

IDUs in Bayamon, Puerto Rico. Study subjects comprised 521 Puerto Rican IDUs from East Harlem and 303 IDUs from Bayamon. The mean frequency of injection among IDUs in East Harlem was 2.8, the corresponding mean in Bayamon was 5.4. Younger IDUs reported a higher number of daily injection episodes than older IDUs, and the IDU group in Bayamon was 5 years younger than the group in East Harlem. The drug use variables accounted for a greater portion of the between-city difference than the demographic and psychosocial variables. Use of noninjected drugs, as well as the use of prescribed methadone, were found to be associated with a lower number of daily injections. Conversely, injection of cocaine, injection of cocaine mixed with heroin ("speedball"), and injection of larger amounts of drug solution were found to be associated with a higher number of daily injections.

[94. Drug Alcohol Depend. 2001 Aug 1;63\(3\):229-43.](#)

Prevalence and correlates of substance use disorders among older adolescents in Puerto Rico and the United States: a cross-cultural comparison.

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Although there are substantial data on adolescent substance use, little systematic research has studied the prevalence of adolescent substance disorders in general populations, let alone cultural differences in disorder prevalence. In this paper we report the prevalence and correlates of alcohol and drug use and disorder among older adolescents on Puerto Rico (PR) and in the United States (US). Data come from an island-wide survey of the PR general residential population (15-18 year old subsample, unweighted N=922) fielded in 1997, and from the National Comorbidity Survey of the US household population (15-18 year old subsample, unweighted N=641), fielded in 1991. Both surveys used a similar standardized interview based on the Composite International Diagnostic Interview (CIDI) to generate DSM-IV diagnoses. Bivariate analyses and logistic regression were used. The major findings are: (1) US youth report higher rates of lifetime alcohol and drug use and substance-related disorder than PR youth; (2) the transition to abuse or dependence occurs for one-third of US drinkers, one-fifth of drinkers in PR, and about one-half of the drug users in both US and PR; (3) there are marked variations across sites in the types of symptoms substance users are likely to experience; (4) with the exception of family income, most correlates operate similarly in both sub-samples; and (5) the majority of both US and PR youth with a past year substance use disorder did not report any service utilization in the past year.

[95. J Acquir Immune Defic Syndr. 2001 Feb 1;26\(2\):164-9.](#)

Trends in HIV seroprevalence and needle sharing among Puerto Rican drug injectors in Puerto Rico and New York: 1992-1999.

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This study assessed trends in HIV seroprevalence and needle-sharing behaviors among Puerto Rican injection drug users (IDUs) in Puerto Rico and New York. Data from two studies of IDUs conducted from 1992 through 1995 and 1998 through 1999 in Bayamón, Puerto Rico, and East Harlem, New York, were examined to assess trends over this period. Separate analyses were conducted for IDUs who were current crack smokers. Significant decreasing trends in seroprevalence were found among IDUs in the New York and Puerto Rico samples ($p < .001$). Significant decreasing trends in receptive and distributive needle sharing were found in the New York sample, and a significant decline in receptive sharing was found in the Puerto Rico sample. Overall, higher levels of needle-sharing behaviors were reported in Puerto Rico compared with New York. Decreasing trends in needle sharing and seroprevalence in both communities are an encouraging finding. Ongoing epidemiologic studies to monitor the epidemic and continued prevention efforts to help maintain or further these declines are needed, particularly to address the higher rates of needle sharing in Puerto Rico.

[96. J Womens Health Gen Based Med. 2000 Dec;9\(10\):1071-80.](#)

Drug-involved women as potential users of vaginal microbicides for HIV and STD prevention: a three-city survey.

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We wished to obtain potential users' perspectives on vaginal microbicides from a population of women at high risk for HIV. We conducted a face-to-face survey of convenience samples (total n = 743) of drug-using women and female sexual partners of male injection drug users in Bridgeport, Connecticut, Providence, Rhode Island, and San Juan, Puerto Rico. Ninety percent of respondents said that they would be very likely to use microbicides with paying partners and 78% with primary partners ($p = 0.001$). High hypothetical likelihood of use was expressed even after several potential product characteristics (e.g., causes minor vaginal irritation or burning) were rated as unacceptable. Latinas had significantly higher predicted likelihood of use with primary ($p = 0.001$) and paying partners ($p = 0.018$) than blacks and whites. Eighty percent of respondents preferred products that enhance sexual pleasure by providing additional lubrication or "wetness." More than 80% of respondents said that they would want their primary partners to know of their microbicide use, and 42% ($p = 0.001$) said that they would want their paying partners to know. Women's concern about a paying partner's violent response to suggested use of risk reduction measures was inversely related to predicted likelihood of microbicide use ($p = 0.045$). Microbicides should be assessed in the context of the potential users' actual relationships and cultures. Achieving broad acceptability among drug-involved women will require a range of products.

[97. Psychol Rep. 2000 Feb;86\(1\):275-80.](#)

Personality and psychopathology of drug addicts in Puerto Rico.

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Drug abuse is one of the most pressing sociomedical problems of society. The purpose of this study was to examine the personality and psychopathology of addicts. 229 addicts in treatment programs scored high on Neuroticism and on the Lie Scale and low on Psychoticism and Extraversion on the Eysenck Personality Questionnaire for Puerto Rico. An Addiction Scale, based on a factor analysis, showed a high component of Neuroticism items.

[98. P R Health Sci J. 2000 Mar;19\(1\):39-47.](#)

[Descriptive study of animal attacks and bites in the municipality of San Juan, Puerto Rico, 1996-1998].

[Article in Spanish]

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The present study described the frequency of animal bites and attacks in the municipality of San Juan, Puerto Rico between the fiscal years 1996 through 1998. A total of 275 cases were reported to the San Juan Local Office of Environmental Health. The distribution of cases by gender was equal, and persons aged 18 years or older had the highest frequency of animal bites and attacks (52.9%). The animal species reported to be involved in the majority of animal bites was the dog (81.1%). Upper extremities were involved in 43% of these injuries. Animal bites caused by dogs were more often reported among male victims (87.4%) ($p = 0.031$). Approximately 41% of dog bites and attacks and 75% of bites and attacks caused by other animal species were documented as provoked ($p = 0.002$). More than 75% of the injuries in the head, face or neck involved children < 13 years whereas 65.9% of the injuries in the upper extremities involved adults (> 18 years) ($p = 0.001$). Animal bites and attacks in the upper extremities were more prominent among injuries caused by an animal species different to the dog (71%) ($p < 0.001$). We conclude that animal bites and attacks is a public health concern in light of the increasing pet population. Therefore, educational strategies towards the general population must stress careful supervision of the human-animal interaction as well as the general procedures to follow in case of an injury.

[99. Arch Pediatr Adolesc Med. 2000 Jan;154\(1\):65-70.](#)

Poison prevention counseling: a comparison between family practitioners and pediatricians.

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OBJECTIVES: To compare the current opinions and practices of family practitioners with those of pediatricians regarding poison prevention anticipatory guidance (PPAG) and to further assess which factors, if any, are associated with providing counseling on this topic. **DESIGN:** Cross-sectional mail survey. **PARTICIPANTS:** Family practitioners and pediatricians throughout the United States and Puerto Rico, randomly selected from the membership list of the American Medical Association. **MAIN OUTCOME MEASURE:** Reported frequency of providing parents with PPAG. **RESULTS:** Of the 1000 physicians surveyed, 975 were eligible and 500 returned surveys that could be analyzed (227 family practitioners and 273 pediatricians), for a response rate of 51.3%. The majority of physicians in each field (family practice, 81.9%; pediatrics, 87.2%) reported that they believe it is their responsibility to provide PPAG to parents ($P = .08$). Family practitioners, however, were less likely than pediatricians to provide parents with PPAG (66.5% vs 91.9%; $P < .001$). When adjusted for other variables, such as age and sex, family practitioners were 5.4 times less likely than pediatricians to provide parents with PPAG (odds ratio, 0.19; 95% confidence interval, 0.09-0.37). Family practitioners, more often than pediatricians, cited lack of training on poisoning prevention as a reason for not providing parents with PPAG (46.1% vs 18.2%; $P = .02$). Among all physicians, those who received postresidency training on PPAG were more likely to provide PPAG than those who had not received postresidency training on this topic (odds ratio, 3.21; 95% confidence interval, 1.44-7.18). Having received residency training on poisoning prevention, however, did not increase the likelihood of providing PPAG (odds ratio, 1.69; 95% confidence interval, 0.86-3.30). **CONCLUSIONS:** Although it is currently recommended to include PPAG as part of the routine preventive pediatric care, this study shows that one third of family practitioners do not provide parents with PPAG. Family practitioners should increase their efforts aimed at poisoning prevention. Those involved with training residents in family practice and pediatrics should place greater emphasis on this topic to increase the impact of this training on actual PPAG practices.

[100. J Stud Alcohol. 1999 Nov;60\(6\):790-9.](#)

The Spanish Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS): reliability and concordance with clinical diagnoses in a Hispanic population.

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OBJECTIVE: The study reports the process of translation into Spanish and adaptation to the Hispanic culture of the Alcohol Use Disorder and Associated Disabilities Schedule (AUDADIS). This instrument is a structured diagnostic interview schedule specifically developed for the assessment of substance-related disorders and their comorbid disorders and disabilities. **METHOD:** A random sample ($N = 169$) of adults from a primary health care clinic in Puerto Rico was selected. The test-retest reliability of the instrument was examined across time and across interviewers, and the validity was assessed by comparing computer-derived diagnoses obtained through the administration of lay interviewers with best estimate diagnoses given by board-certified psychiatrists. **RESULTS:** For most diagnoses and symptoms studied, as well as for most of the alcohol consumption measures, the test-retest reliability of the Spanish AUDADIS was consistent with results reported in other national and international studies using this instrument. Good to excellent test-retest reliability was obtained for the diagnoses of alcohol dependence and major depression. Similarly, good to excellent agreement was obtained between the lay administered AUDADIS and best estimate diagnoses for most diagnostic categories, with the exception of dysthymia. As in other studies, the reliability and validity of the substance abuse category was poor. When agreement for this category was estimated independent of lifetime dependence, both the reliability and validity coefficients were considerably improved. **CONCLUSIONS:** The Spanish AUDADIS generally demonstrates good to excellent levels of reliability and validity that are comparable to findings reported for this instrument in other national and international studies.

[101. Subst Use Misuse. 1999 Nov;34\(13\):1765-93.](#)

Drug use, AIDS knowledge, and HIV risk behaviors of Cuban-, Mexican-, and Puerto-Rican-born drug injectors who are recent entrants into the United States.

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To date, relatively little research attention has been devoted to the HIV-risky behaviors of persons who are newly arrived in the United States and who use drugs. Data gathered from street-recruited injection drug users (IDUs) recruited in 10 United States cities who were born in Mexico, Cuba, and Puerto Rico and who are recent entrants into the United States suggest that, in comparison to US-born IDUs, Mexican-born subjects are at elevated risk for acquiring

and transmitting HIV as a result of sharing needles with friends and running partners; sharing drug injection implements such as cookers, cotton, and rinse water; frequent injection in HIV-risky settings; use of unsterilized needles; and relatively frequent trading of sex for drugs or money. Puerto-Rican-born IDUs were found to inject drugs relatively frequently, and to do so relatively often in high-risk settings in which sterile injecting equipment and cleaning materials often are scarce. These data also show generally lower levels of AIDS knowledge among the in-migrant IDUs than among US-born IDUs. Respondents from each nationality group most often cited television as the source of their most useful and reliable AIDS information, but also tended to regard community outreach workers as a significant source of reliable AIDS and needle cleaning information. The high levels of involvement in HIV-risky behaviors, deficits in knowledge concerning the means of HIV transmission, and relative ease of mobility of the at-risk (for HIV) individuals examined here indicate a need for a comprehensive public health prevention initiative to limit the future spread of HIV. At a minimum, such an undertaking would do well to incorporate group-specific, culturally appropriate behavioral interventions as well as an information campaign.

[102. Subst Use Misuse. 1999 Dec;34\(14\):1951-75.](#)

The street/treatment barrier: treatment experiences of Puerto Rican injection drug users.

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This study describes, through ethnographic interviews, the treatment experiences of Puerto Rican long-term heroin users who are at extremely high risk for HIV infection and the barriers they perceive to drug treatment. On the basis of this information we suggest policy recommendations for increasing drug treatment access for Puerto Rican long-term injectors of heroin. It is critical that Puerto Rican populations access drug treatment facilities given their risk factors for HIV infection and the high rate of poverty in Puerto Rican communities that exacerbates drug use.

[103. Qual Health Res. 1999 Sep;9\(5\):602-19.](#)

Mothering through addiction: a survival strategy among Puerto Rican addicts.

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In this article, the importance of motherhood in the lives of Puerto Rican addicts is examined. Using a life history method, the authors interviewed 20 Latina females in various stages of recovery from addiction to crack-cocaine or heroin. Their lives as mothers took place in a context of poverty, marginalization, and abuse. Motherhood provided an identity and a line of work that grounded them amidst this dislocation. As their life options became more restricted over time, motherhood provided a lifeline through addiction and into recovery. While using drugs, they relied on a number of strategies to maintain mothering. In recovery, children became the markers of success in a treatment program. These findings challenge public images of female addicts as parents.

[104. Am J Public Health. 1999 Oct;89\(10\):1549-54.](#)

The risks for late adolescence of early adolescent marijuana use.

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OBJECTIVES: The purpose of this study was to assess the relation of early adolescent marijuana use to late adolescent problem behaviors, drug-related attitudes, drug problems, and sibling and peer problem behavior. **METHODS:** African American (n = 627) and Puerto Rican (n = 555) youths completed questionnaires in their classrooms initially and were individually interviewed 5 years later. Logistic regression analysis estimated increases in the risk of behaviors or attitudes in late adolescence associated with more frequent marijuana use in early adolescence. **RESULTS:** Early adolescent marijuana use increased the risk in late adolescence of not graduating from high school; delinquency; having multiple sexual partners; not always using condoms; perceiving drugs as not harmful; having problems with cigarettes, alcohol, and marijuana; and having more friends who exhibit deviant behavior. These relations were maintained with controls for age, sex, ethnicity, and, when available, earlier psychosocial measures. **CONCLUSIONS:** Early adolescent marijuana use is related to later adolescent problems that limit the acquisition of skills necessary for employment and heighten the risks of contracting HIV and abusing legal and illegal substances. Hence, assessments of and treatments for adolescent marijuana use need to be incorporated in clinical practice.

[105. Int J Epidemiol. 1999 Jun;28\(3\):509-13.](#)

Prevalence and correlates of anergy among drug users in Puerto Rico.

Robles RR, Reyes JC, Colón HM, Matos TD, Vilá Pérez L, Marrero CA.

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OBJECTIVES: This study assessed prevalence and correlates of anergy among a cohort of drug users in communities in the San Juan metropolitan area. **METHODS:** In all, 719 drug injectors and crack users were recruited in neighbourhoods in the San Juan metropolitan area following a stratified cluster design of 30 copping areas (places where drugs are sold). **RESULTS:** Slightly more than one-third of the total proportion of participants, 34.2%, were HIV positive and 30.3% anergic. Subjects with a history of incarceration, the HIV positive, and those reporting chronic illness were more likely to be anergic than those subjects without these characteristics. **CONCLUSIONS:** Most studies addressing drug users' immune system dysfunction are related to HIV infection. Additional studies are needed to provide a more comprehensive understanding of drug users' immune systems.

[106. Health Policy. 1998 Sep;45\(3\):209-20.](#)

Syringe and needle exchange as HIV/AIDS prevention for injection drug users in Puerto Rico.

Robles RR, Colón HM, Matos TD, Finlinson HA, Muñoz A, Marrero CA, García M, Reyes JC.

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This study evaluated the effectiveness of the first needle exchange program (NEP) established in Puerto Rico. The data for this study were collected during the first months of the NEP from July 1995 to March 1996 in 13 communities of the San Juan metropolitan area. Subjects were the participants of two modalities of the NEP: a mobile team and a community-based drug treatment program. During the 3-week evaluation period, 2401 injection drug users (IDUs) were recruited, resulting in a total of 19,195 exchange contacts and 146,323 syringes exchanged. No significant change in drug injection was observed. However, the program was effective in reducing sharing of syringes and cookers. The study suggests that the NEP did help in reducing needle sharing in Puerto Rico. However, the HIV seropositivity in returned syringes suggests the need to continue aggressive prevention programs to arrest the epidemic among IDUs. However, factors related to the socio-cultural environment as well as cultural norms and traditions need to be considered when planning and expanding NEPs.

[107. J Acquir Immune Defic Syndr. 1999 May 1;21\(1\):42-50.](#)

Estimated HIV risk among Hispanics in a national sample of drug users.

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OBJECTIVE: To estimate and compare the HIV risks among three Hispanic subpopulations. **METHODS:** Chronic drug users participating in a nationwide intervention study on drug use were interviewed with regard to drug use and sexual behavior. HIV risk was estimated using information about individuals' HIV-relevant behaviors, the social context (i.e., city) in which such behaviors occur, and published estimates of HIV transmission for various risk behaviors. Multiple linear regression analysis was used to investigate differences in estimated HIV risk between Puerto Rican, Mexican-American, and Mexican drug users, accounting for sociodemographic factors, sexual preference, and geographic region. **RESULTS:** Puerto Ricans had significantly greater estimated overall HIV risk, estimated injection risk, and in general, significantly greater estimated sexual risk than Mexican Americans and Mexicans. No significant differences were found in any estimated risk between Mexican Americans and Mexicans in this sample. No significant differences were found among any of the subgroups for estimated risk from having anal sex while using a condom, or from having receptive anal sex without using a condom. **CONCLUSIONS:** These findings suggest that Puerto Ricans who use drugs experience a higher risk of HIV infection than other Hispanic drug users. Research is needed to identify which economic, social, and cultural components account for this increased risk.

[108. Bol Asoc Med P R. 1998 Jul-Dec;90\(7-12\):158-63.](#)

The relationship between the profile of severity of addiction and the retention of patients in the ambulatory program of DDTP.

Santos EF, Martínez ML, Pérez LM.

OBJECTIVES: The authors described some variables related to the retention of drug dependent veterans receiving outpatient treatment at San Juan V.A.M.C. and compared the profile of addiction severity with retention using a global dysfunction scale. **METHODS:** The clinical charts of 74 patients were examined at random using a 16-item questionnaire based on the ASI scale. The data was processed and analyzed using the Epi Info V6.2 computer program, utilizing chi square as the main statistics. **RESULTS:** The patient's retention in treatment for > or = to 3 months was associated with some specific variables such as: more than 12 years of education, being Catholic, divorced, living with parents, use of more than one drug of preference, having a negative urine toxicology result before treatment and after treatment, and showing a favorable change in urine toxicology results. In terms of severity of dysfunction, a considerable substance problem and an extreme legal problem were associated with a retention of > or = to 3 months, as well as no evidence of occupational problems. **CONCLUSION:** The strong correlation between specific variables and the retention of patients in treatment for > or = to 3 months should create awareness of the importance of available and effective treatments in the fight against substance abuse and mental health problems as well as to educate and integrate family members in patients treatment, since a supportive family member is one of the best tools that patients and therapist can have to help maintain patient's sobriety.

[109. J Stud Alcohol. 1999 Jan;60\(1\):64-9.](#)

The moderating effects of gender and ethnicity on the relationship between effect expectancies and alcohol problems.

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OBJECTIVE: Research has demonstrated that alcohol outcome expectancies moderate the relationship between psychological states such as stress and negative affect and alcohol use. This study examined whether the relationship between expectancies and alcohol problems would be moderated by gender and ethnicity. **METHOD:** Using a household survey format, personal interviews were conducted with Puerto Rican and Irish American men and women. The final sample consisted of 412 (231 male) Puerto Ricans and 476 (252 male) Irish Americans. Alcohol expectancies were measured with the Effects of Drinking Alcohol Scale. All subjects resided in the New York metropolitan area. The original study was designed to compare the drinking behaviors and alcohol-related beliefs of groups with varied drinking practices and distinct drinking beliefs. **RESULTS:** Both gender and ethnicity moderated the links between aggressive and self-control expectancies and drinking problems. For example, anticipated loss of control from drinking was more negatively related to Puerto Rican and female alcohol problems than it was to Irish and male problems. **CONCLUSIONS:** The present findings suggest that whether an outcome expectancy is associated with more alcohol problems depends upon the particular meaning of the outcome. This meaning, in turn, depends upon an individual's particular sociocultural perspective which is associated with such personal characteristics as gender and ethnicity.

[110. Subst Use Misuse. 1998 Dec;33\(14\):2737-55.](#)

Traditionalism in the prevention of substance misuse among Puerto Ricans.

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Data are presented from a multicluster stratified sample of 1,084 Puerto Rican households in the New York City area. Researchers examined the impact of loss of traditional Hispanic family-oriented gender role values and degree of acculturation upon drug use. Sociodemographic variables are presented. Indices of "traditionalism" and "acculturation" were created, validated, and correlated with drug use. Traditionalism was found to covary negatively with drug use, but more so for women. The positive relationship between acculturation and drug use was found to be influenced by different levels of traditionalism. Implications for treatment and prevention are discussed.

[111. AIDS Care. 1998 Jun;10\(3\):329-38.](#)

Factors associated with changes in sex behaviour among drug users in Puerto Rico.

Robles RR, Marrero CA, Matos TD, Colón HM, Finlinson HA, Reyes JC, Sahai H.

Research Institute, Mental Health and Anti-Addiction Services Administration, San Juan, Puerto Rico. Despite available strategies to prevent sex risk behaviours in Puerto Rico, heterosexual transmission of HIV continues to increase. Since 1990, heterosexual contact has been the fastest growing infection risk category among the island's general population, and the primary transmission route for women and children. To understand change in sex risk behaviours and factors related to change, 911 drug injectors and 359 crack smokers were recruited from the San Juan metropolitan area following a stratified cluster design. This study comprised a total of 1,004 (79.1%) drug users who were assessed at follow-up. Abstinence from sex behaviour increased from 54.6% to 61.1% ($p < 0.01$), use of condoms during vaginal sex also increased from 26.4% to 36.9% ($p < 0.01$). In multivariate analysis, significant predictors of abstinence were gender, injection drug use, HIV seropositivity and not having a steady partner. Predictors of using condoms during vaginal sex were HIV seropositivity, STD diagnosis and participation in an HIV preventive programme. These findings indicate that additional HIV preventive efforts are needed to reduce sex risk behaviours among drug users who have a steady sex partner, as well as among drug users who are HIV-negative.

[112. Am J Phys Anthropol. 1998 Nov;107\(3\):351-61.](#)

A comparison of the nutritional status and food security of drug-using and non-drug-using Hispanic women in Hartford, Connecticut.

Himmelgreen DA, Pérez-Escamilla R, Segura-Millán S, Romero-Daza N, Tanasescu M, Singer M.
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This study compared food insecurity, nutritional status (as measured through anthropometry and dietary intake), and food preparation patterns of low-income Puerto Rican female out-of-treatment drug users with that of low-income Puerto Rican women who reported no drug use. A convenience sample of 41 drug users was compared with 41 age-matched non-drug-users from inner-city Hartford, Connecticut. A culturally appropriate food frequency questionnaire was administered and anthropometric measurements were taken. The findings suggest a high degree of poverty among all study participants, but in particular among drug users. Drug users were more likely than the controls to be food insecure ($P < 0.05$) and to be exposed to increasingly severe food sufficiency problems. The daily frequency of consumption of vegetables was lower ($P = 0.03$) for drug users than non-drug-users. Conversely, the frequency of consumption for sweets/desserts was significantly higher for drug users than the controls ($P = 0.0001$). Drug users, who were classified as food insecure were less likely to consume vegetables ($P = 0.004$) and fish ($P = 0.03$) than were controls who were food insecure. When comparing drug users with controls, the former group reported consuming fewer meals during a usual week than the latter group ($P < 0.0001$). Drug users were more likely to fry foods ($P = 0.02$) while the controls were more likely to bake ($P = 0.005$), boil ($P = 0.02$), and steam ($P = 0.002$) foods. All anthropometric measurements, except for height, were significantly lower for drug users. The results show that drug users generally maintain poorer nutritional status than non-drug-users. Nutrition interventions as part of drug treatment are needed.

[113. J Psychoactive Drugs. 1998 Jul-Sep;30\(3\):247-53.](#)

Drug use and HIV risks among African-American, Mexican-American, and Puerto Rican drug injectors.

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This article documents the prevalence of injection-related HIV risk behaviors among a sample of 758 Mexican-American, Puerto Rican, and African-American drug injectors derived from the National Institute on Drug Abuse Cooperative Agreement database. The results show that the two Hispanic subgroups had higher injection-related risks than the African-American group. Further, among Hispanics, Puerto Ricans had higher rates of drug injection than Mexican-Americans, but Mexican-Americans had higher rates of sharing injection paraphernalia than Puerto Ricans. The research suggests that more aggressive HIV/AIDS intervention efforts be targeted to minority injection drug users, especially those that are contextualized by the racial/ethnic group targeted.

[114. Am J Drug Alcohol Abuse. 1998 May;24\(2\):199-223.](#)

A cluster analysis of not-in-treatment drug users at risk for HIV infection.

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The purpose of the analysis described here was to classify not-in-treatment drug users participating in the National Institute on Drug Abuse (NIDA)-sponsored Cooperative Agreement study into several "homogeneous" HIV risk groups using cluster analysis. Data for this analysis (N=17,778) were collected at 19 study sites in the United States and Puerto Rico. Measures selected for the cluster analysis were limited to (a) current drug use and HIV risk behaviors, (b) mutually exclusive behaviors, (c) behaviors directly related to HIV risk, and (d) behaviors that were not statistically rare. Eight homogeneous HIV risk clusters were produced. Crack cocaine use was the most distinguishing feature of three clusters. Another three clusters were distinguishable by drug injection and needle use practices. Two additional clusters could not be grouped with either the crack- or the injection-dominant clusters. Prostitution was the most distinguishing risk behavior of one of these clusters, and extremely high drug injection frequencies and relative rates of risky needle use characterized the other. Composition of the clusters varied significantly by gender, race/ethnicity, educational attainment, and drug use characteristics. In addition, perceptions and behaviors initiated to reduce the chances of becoming infected with HIV varied by cluster. Subjects in the crack-predominant clusters reported low perceptions of the chances of getting AIDS. Perceptions of the chances of becoming infected with HIV among subjects in the injection-predominant clusters were strongly related to injection frequency. Seroprevalence was also related to cluster. Higher rates of HIV infection were evident among the injection-predominant clusters, and higher rates were related to frequency of injection and the rate of risky needle use. Among the crack-predominant clusters, the relationship between drug use and sexual behaviors and HIV infection was less clear.

[115. Am J Drug Alcohol Abuse. 1998 May;24\(2\):187-97.](#)

HIV, AIDS, and other health risks: findings from a multisite study--an introduction.

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In late 1990 the National Institute on Drug Abuse (NIDA) initiated the Cooperative Agreement (CA) for AIDS Community-Based Outreach/Intervention Research Program. The goal of this program was to prevent the further spread of HIV among out-of-treatment drug users, in particular injection drug users (IDUs) and crack cocaine users, their sexual partners, and those at risk for initiating injection behavior. To accomplish this goal, the CA set out to monitor drug use and HIV risk behaviors, assess the efficacy of various HIV risk reduction interventions, and develop and refine outreach and intervention strategies. Twenty-three research sites, 21 rural and urban sites in the United States and one each in Puerto Rico and Brazil, were included in the CA program. This article presents an overview of the CA as well as a synopsis of the studies covered in this special issue examining the total CA database.

[116. Women Health. 1998;27\(1-2\):1-18.](#)

Women's drug use and HIV risk: findings from NIDA's Cooperative Agreement for Community-Based Outreach/Intervention Research Program.

Coyle SL.

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[117. J Acquir Immune Defic Syndr Hum Retrovirol. 1998 Apr 15;17\(5\):477-83.](#)

Risk behaviors, HIV seropositivity, and tuberculosis infection in injecting drug users who operate shooting galleries in Puerto Rico.

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This study was designed to assess HIV risk behaviors, HIV seroprevalence, and tuberculosis (TB) infection in shooting gallery managers in Puerto Rico. The subjects were 464 injection drug users (IDUs), of whom 12.5% reported managing shooting galleries. The median frequency of drug injection was higher in shooting gallery managers than in nonmanagers. A trend was observed for purified protein derivative (PPD) reactivity to increase according to the length of time spent as a gallery manager, but this trend was not statistically significant. However, anergy rates increased significantly with increase in the number of months spent as shooting gallery manager ($p = .021$). Multivariate analyses showed that IDUs reporting shooting gallery management experience of $> \text{ or } = 25$ months were more likely to be infected with HIV. Prevention programs need to emphasize strategies to protect the health of shooting gallery clients

and, in particular, shooting gallery managers. Additional studies are required to determine effective strategies for reducing the risk of HIV and TB infection in shooting galleries.

[118. J Genet Psychol. 1998 Mar;159\(1\):13-29.](#)

Similar and different precursors to drug use and delinquency among African Americans and Puerto Ricans.

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Correlational and net regression techniques were used to examine the commonalities and differences in risks for later drug use and delinquency among African American and Puerto Rican adolescents. Eight-eight percent of the risks were significantly related to both problem behaviors. Within the personality, family, peer, ecology, and acculturation domains, many risks independently contributed to the prediction of each problem. Only three risks had a significantly stronger relationship to one of the problem behaviors than to the other. Finding so many common predictors supports a general dimension of problem behavior and highlights the psychosocial risks for drug use and delinquency. The commonalities suggest that interventions targeting these adolescent risks might reduce both problem behaviors.

[119. J Psychoactive Drugs. 1997 Oct-Dec;29\(4\):375-91.](#)

The heroin epidemic in New York City: current status and prognoses.

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Since 1989, heroin production worldwide has risen; in New York City, as its purity rose and prices fell, street-level markets were restructured and offered heroin in addition to cocaine and crack (which had been popular during the 1980s). While officials estimate that there are between 500,000 and one million hard-core, chronic heroin users nationwide, evidence of supplemental users heralding another heroin era includes: more overdoses and overdose deaths, greater demand for treatment, larger seizures of heroin at all levels of distribution and related arrests, and broader media coverage. In this article, the authors describe the characteristics of populations in which there may have been a percentage increase of new users, such as young middle- or upper-class European-Americans, young Puerto Ricans and recent Haitian and Russian immigrants. The abstinence of young African-Americans is also noted. The article ends with a preliminary needs assessment of the new users in the areas of health (including AIDS), housing, employment, treatment, arrest and imprisonment.

[120. Cell Mol Biol \(Noisy-le-grand\). 1997 Nov;43\(7\):1145-52.](#)

Psycho social and clinical spectrum of HIV/AIDS injecting drug users in Bayamón, Puerto Rico.

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OBJECTIVES: To describe the demographic characteristics, the risk related practices, and the clinical and immunological features of Puerto Rican HIV injecting drug users (IDU's). DESIGN: Cross-sectional survey of a longitudinal cohort (N=1,500). METHODS: The HIV Central Registry at the Universidad Central del Caribe has been recruiting HIV/AIDS patients attending the Immunologic Clinic and the University Hospital Ramón Ruiz Arnau since may 1992. 1500 patients have been interviewed and a record including demographic, risk related, clinical and immunologic data has been created for each one of them. Chi square and t-tests were performed to assess the potential significant differences of the IDU's vs the non-IDU's. RESULTS: 57.1% of the HIV/AIDS patients were IDU's. Most of them were males, had a lower education level, with an age fluctuating between 27 to 36 years old and most of them were unemployed. Most IDU's reported to have had heterosexual relations. With regard to the clinical spectrum, Pneumocystis carinii pneumonia (PCP) was the only indicative condition associated with injecting drug use (IDU), as well as bacterial endocarditis, chronic diarrhea, night sweats and idiopathic fever. The spectrum of vulnerabilities of IDU's is larger than that of non-IDU's, with regard to psycho-social, behavioral and clinical features. These vulnerabilities can limit their access to services and render their compliance to treatment more difficult.

[121. Cell Mol Biol \(Noisy-le-grand\). 1997 Nov;43\(7\):1091-6.](#)

Pattern of injecting drug uses and HIV-1 infection: analysis from needle exchange program.

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Contents of exchanged needles/syringes were analyzed to examine: i) the prevalence of HIV-1 infection among injecting drug users (IDU's), and ii) the classes of drugs injected by the population. A needle exchange program in Puerto Rico (PR) was initiated under the auspices of the PR Department of Health and is currently being administered by the Community Research Initiative of Puerto Rico, Inc. Serological tests for human immunodeficiency virus type 1 (HIV-1) were performed with 387 samples with clearly visible amounts of blood, which were chosen randomly from the needle exchange program of the San Juan Metropolitan area on the north coast, and also of the Mayaguez area on the west coast of the island. In addition, 200 syringes without visible amount of blood were also randomly chosen, their contents were extracted with acidified methanol and analyzed by gas chromatography-mass spectrometry (GC/MS) for drug content. One hundred and ninety four of the samples (58%) were confirmed to be positive for HIV-1. Four samples contained heroin alone, 190 were positive for cocaine and 2 indicated simultaneous use of both heroin and cocaine. In contrast to existing literature, based mostly on self-description, which indicates widespread use of heroin and cocaine mixture ("speedball") among IDU's, our physical evidence suggests that a large majority of IDU's in PR currently inject cocaine but not heroin; and also that mixed drug use is rather rare. Reliability of self-described information may need to be re-evaluated.

[122. J Am Acad Child Adolesc Psychiatry. 1997 Sep;36\(9\):1260-8.](#)

African-American and Puerto Rican drug use: a longitudinal study.

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OBJECTIVE: To examine the interrelationship of acculturation, family, personality, ecology, and peer domains measured in adolescence as they impact drug use 5 years later and to assess the role of family variables as buffers against personality risks. METHOD: Youths completed questionnaires in classrooms at T1 and were individually interviewed at T2 (mean age = 20 years). Data were analyzed separately for African-Americans and Puerto Ricans using correlations, hierarchical multiple regressions, and two-way interactions. RESULTS: Most results were similar for both ethnic groups. Eighty percent of the T1 variables significantly related to T2 stage of drug use. A mediational model of the path to drug use was supported. Acculturative influences were associated with family relations, which in turn were related to personality attributes. A reciprocal relationship emerged between the personality and peer domains in their impact on drug use. Family variables primarily enhanced the effect of protective personality traits on drug use. CONCLUSIONS: Stability of drug use alone cannot explain the relationship between the earlier domains and later drug use. Specific adolescent risks have long-lasting effects. The personality domain has a direct effect on later drug use despite a benign picture in the acculturation, family, and peer domains.

[123. Bol Asoc Med P R. 1997 Jul-Sep;89\(7-9\):146-9.](#)

[Internal and external environment of the Puerto Rican adolescent in the use of alcohol, drugs and violence].

[Article in Spanish]

Parrilla IC, Moscoso MR, Vélez M, Robles RR, Colón HM.

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PURPOSE: Identify risk factors associated to violent behavior among adolescent students. METHODS: A survey was conducted using a two-staged stratified cluster sampling design. It represents all junior and high school students of Puerto Rico. Students from 117 schools were administered an anonymous questionnaire. RESULTS: Alcohol use was reported by 78.7% of students, and 14% reported illegal drug use. About 25% committed one violent act during the previous year, and 22% committed two acts or more. Drug use, alcohol use, not getting along with their parents, being a male, school failure and drug use by siblings were identified as risk factors for violent behavior. Church attendance was

identified as a protective factor. DISCUSSION: Primary physicians can play an important role in violence prevention through early identification of family violence.

[124. Ethn Health. 1997 Mar-Jun;2\(1-2\):77-88.](#)

Epidemiology of self-reported past heavy drinking in Hispanic adults.

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OBJECTIVES: Self-reports of past heavy drinking correlate with the current drinking practices and with risk of mortality in non-Hispanic males. The prevalence of past heavy drinking has not been reported in Hispanic populations. METHODS: Using data from the Hispanic Health and Nutrition Examination Survey (HHANES) we (1) report on the prevalence, duration and severity of past heavy drinking in three Hispanic groups, (2) compare the current alcohol consumption patterns among past heavy drinkers and those who do not report a history of past heavy drinking and (3) compare the risk factor profiles and health indicators in these two groups. RESULTS: The prevalence of past heavy drinking among Mexican American and Puerto Rican males ranged from 28-35% while the rates for Cuban American males ranged from 7-16%. The rates for Hispanic women were much lower (1-8%). The average years of past heavy drinking ranged from 2.3-14.9 years, while the alcohol consumption during the past heavy drinking period ranged from 24.4-44.0 drinks per week. Past heavy drinkers tended to consume more alcohol at present than did never heavy drinkers with the greatest differences found for Mexican American females. Comparisons of the risk factors and health indicators by drinking status revealed a higher prevalence of smoking among past heavy drinkers (50-60%) versus never heavy drinkers (34-43%). Past heavy drinking Mexican American females also reported significantly more chronic conditions and depressive symptoms than did never heavy drinkers. CONCLUSIONS: Prevalence rates of past heavy drinking among Mexican American and Puerto Rican males are approximately three times higher than rates reported for non-Hispanic male populations.

[125. J Genet Psychol. 1997 Mar;158\(1\):25-39.](#)

Drug use and delinquency: shared and unshared risk factors in African American and Puerto Rican adolescents.

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The shared and unshared psychosocial risk factors related to stage of drug use and delinquency were examined. The sample consisted of 655 African American and 600 Puerto Rican male and female adolescents. Net regression analysis was used to analyze the data. The results showed that adolescent stage of drug use and delinquency reflect shared and unshared risk factors. The magnitude of the risk factors for adolescent delinquency was greater than for stage of drug use. The findings support a socialization hypothesis (from parent, to personality, to behavior), and the data were congruent with a dispositional model (from child, to parent or peer, to behavior).

[126. P R Health Sci J. 1996 Sep;15\(3\):233-6.](#)

Mycobacterium tuberculosis infection among crack and injection drug users in San Juan, Puerto Rico.

Reyes JC, Robles RR, Colón HM, Marrero CA, Castillo X, Meléndez M.

Addiction studies, School of Medicine, Universidad Central del Caribe.

This study aims to determine the prevalence of Mycobacterium tuberculosis infection and its association with HIV and other health risk factors among drug users. A sample of 716 IDUs and crack users were enrolled from community sites. Consenting subjects were tested for HIV serum antibody status. Drug users with an unknown PPD status were administered a PPD skin test and an energy panel of three antigens (Candida, mumps and tetanus). Overall, 68 (10.3%) were reactive to the PPD skin test, 240 (34.7%) were HIV positive and 195 (29.5%) showed cutaneous anergy. Participants infected with tuberculosis (TB) were more likely to be HIV seropositive, and to have a history of incarceration and residential drug treatment than those not infected. In addition, TB infection was more prevalent among intravenous drug users (IDUs) and shooting gallery managers. These findings suggest that drug users should be considered at high risk for TB and HIV infection. Innovative programs to monitor both infections among drug users are needed to arrest what can become a dual epidemic of HIV and TB in the near future.

[127. P R Health Sci J. 1996 Sep;15\(3\):227-31.](#)

Risk factors for shooting gallery use among drug injectors in Puerto Rico.

Reyes JC, Robles RR, Colón HM, Freeman DH, Sahai H, Matos TD.

Research Institute, Mental Health and Anti Addiction Services Administration, San Juan, Puerto Rico 00928-1414.

Needle sharing is one of the principal risk behaviors leading to HIV transmission among injection drug users (IDUs). Shooting galleries, a social context where IDUs rent, share, and borrow needles, are locations usually found near drug markets. This study, which interviewed 1,700 IDUs from May 1989 to June 1990, assesses sociodemographic characteristics and HIV risk behaviors among shooting gallery users in Puerto Rico. Multivariate analyses showed that shooting gallery use is associated with speedball (a concoction of heroin and cocaine) injection, income from illegal activities and previous drug treatment. Shooting gallery users were more likely to rent, share, and borrow needles, and less likely to always use bleach and water to clean needles. Strategies to reduce shooting gallery use among drug injectors are discussed.

[128. P R Health Sci J. 1996 Sep;15\(3\):221-5.](#)

Crack use in Puerto Rico: evidence of a recent epidemic.

Matos TD, Robles RR, Marrero CA, Colón HM.

Research Institute, Mental Health and Anti Addiction Services Administration, San Juan, Puerto Rico 00928-1414.

This study examines the prevalence of crack use among out-of-treatment drug users in the San Juan metropolitan area. Of the sample of 849 drug users, 310 (36.5%) were crack users only, 179 (21.1%) were drug injectors and crack users, and 360 (42.4%) were drug injectors only. To study the characteristics of crack users we selected the subjects who reported the use of crack only. Of the 310 subjects, 193 (62.3%) men and 117 (37.7%) women, the mean age was 29 years. Significant differences were observed by gender. Females reported higher education, living in a nuclear family, crack/cocaine as the first drug used, history of sexually transmitted diseases and higher rates of HIV seropositivity. Males were more likely to report income from illegal activities, incarceration, use of multiple drugs, and more years of drug use. Among those sexually active, females were more likely to practice unprotected vaginal sex, have multiple sex partners, engage in prostitution (exchange of sex for money and/or drugs) and use condoms.

[129. AIDS. 1996 Sep;10\(10\):1163-8.](#)

Behavioral effects of receiving HIV test results among injecting drug users in Puerto Rico.

Colón HM, Robles RR, Marrero CA, Reyes JC, Sahai H.

Research Institute, Puerto Rico Mental Health and Anti-Addiction Services Administration, San Juan, Puerto Rico, USA.

OBJECTIVES: To examine the influence of knowledge of HIV serostatus on changes in risk behaviors among injecting drug users (IDU). **PROCEDURES:** IDU were recruited through sampling conducted at street drug-selling areas. Of 374 participants, 88.8% consented to be HIV tested and returned for their test results, and 73.5% were relocated and interviewed 6 months later. **RESULTS:** Of the 176 IDU who reported a seronegative test result prior to baseline, 29 tested seropositive at baseline. No significant differences were found between HIV-positive and HIV-negative IDU in needle risk behaviors. HIV-positive IDU were significantly less likely to report being sexually active [odds ratio (OR), 0.41 : 95% confidence interval (CI), 0.22-0.75] and more likely to use condoms during vaginal (OR, 4.43; 95% CI, 1.48-13.29) and oral sex (OR, 6.67; 95% CI, 1.42-31.33). **CONCLUSION:** The findings of this study show the importance of encouraging IDU to undergo periodic retesting. HIV testing could have an important role in reducing heterosexual transmission from IDU.

[130. Subst Use Misuse. 1996 Jul;31\(9\):1155-65.](#)

The self-generated alcohol expectancies of Puerto Rican drinkers and abstainers.

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Using data from an epidemiological study of mainland Puerto Rican drinking, this work compares the self-generated alcohol expectancies of Puerto Rican drinkers and abstainers. While positive expectancies are more characteristic of drinkers, especially "heavy drinkers," negative expectancies are more characteristic of abstainers, especially lifetime abstainers. Results are discussed in terms of the cultural influences on alcohol expectancies and the positivity bias in alcohol expectancy research.

[131. Br J Psychiatry Suppl. 1996 Jun;\(30\):58-67.](#)

Comorbidity and boundaries of affective disorders with anxiety disorders and substance misuse: results of an international task force.

Merikangas KR, Angst J, Eaton W, Canino G, Rubio-Stipec M, Wacker H, Wittchen HU, Andrade L, Essau C, Whitaker A, Kraemer H, Robins LN, Kupfer DJ.

Yale University School of Medicine, Genetic Epidemiology Research Unit, New Haven, Connecticut 06510-3223, USA. Associations between affective disorders, anxiety disorders, and substance use disorders were examined in epidemiological studies conducted in Germany, Switzerland, Puerto Rico, and the mainland US. There was a remarkable degree of similarity across studies in the magnitude and type of specific disorders associated with the affective disorders. Comorbidity with affective disorders was greater for the anxiety disorders than for substance misuse. Panic disorder was the subtype of anxiety that was most highly comorbid with depression. Social phobia was the specific phobic type with the strongest association with the affective disorders. The magnitude of associations between substance misuse and affective disorders generally was quite low and less consistent across sites. No major differences were found in the patterns of comorbidity by gender or age group, affective subtype or prevalence period. The onset of anxiety disorders generally preceded that of depression, whereas alcohol misuse was equally likely to pre-or post-date the onset of affective disorders. Finally, comorbidity was associated with an elevation in treatment rates across all sites, confirming Berkson's paradox on an international level.

[132. JAMA. 1996 Mar 27;275\(12\):904-5.](#)

From the Centers for Disease Control and Prevention. Continued sexual risk behavior among HIV-seropositive, drug-using men--1993.

[No authors listed]

[133. P R Health Sci J. 1996 Mar;15\(1\):45-8.](#)

1995 Bailey K. Ashford lecture. Public health lessons from two catastrophic epidemics: the toxic oil syndrome and the eosinophilia-myalgia syndrome.

James TN.

University of Texas Medical Branch, Galveston 77555-0129, USA.

[134. MMWR Morb Mortal Wkly Rep. 1996 Feb 23;45\(7\):151-2.](#)

Continued sexual risk behavior among HIV-seropositive, drug-using men--Atlanta; Washington, D.C.; and San Juan, Puerto Rico, 1993.

Centers for Disease Control and Prevention (CDC).

Behaviors associated with increased risk for sexual transmission of human immunodeficiency virus (HIV) by infected persons include unprotected intercourse, multiple sex partners, use of crack cocaine, failure to disclose serostatus to sex partners, and trading sex for money or drugs. Some sexually active, HIV-infected persons in the United States continue to practice risky behaviors. To characterize continued sexual risk behaviors among HIV-positive, illicit-drug using men, in 1993 CDC analyzed data from such men recruited for a small group-intervention program in three cities - Atlanta; Washington, D.C.; and San Juan, Puerto Rico. This report summarizes the results of that analysis, which indicate that some seropositive men continue to engage in unprotected sex.

[135. Drugs Soc \(New York\). 1996;9\(1-2\):173-84.](#)

Effects of HIV testing and counseling on reducing HIV risk behavior among two ethnic groups.

Robles RR, Matos TD, Colon HM, Marrero CA, Reyes JC.

[136. Bol Asoc Med P R. 1996 Jan-Mar;88\(1-3\):3-7.](#)

A descriptive-exploratory study of outcome and some biopsychosocial characteristics of drug dependent veterans in Puerto Rico.

Santos EF, Díaz D, Martínez A, Gómez E, Visbal GN.

I. OBJECTIVE: The authors attempted to correlate outcomes with various significant biopsychosocial variables in drug dependent veterans receiving outpatient treatment at San Juan V.A.M.C. II. METHODS: The clinical charts of 120 inactive patients were examined using a 50 item questionnaire. The data was processed and analyzed using the EpiInfo v.5 computer program. The outcome of the patients was measured using a Goal Attainment Scale Technique with demonstrated validity and reliability. III. RESULTS: The patients retention in treatment for 12 or more visits and its relationship to good outcomes was the most significant finding of this study ($P < 0.00000000$, 80.5% of patients improved). Only 5% of patients with 3 or less visits showed positive outcomes. Another variable associated with good outcomes was a supportive wife ($P < 0.02$). HIV reactivity was strongly correlated with IV drug use ($P < 0.037$). IV. CONCLUSIONS: The strong correlation of the retention of patients in treatment for 12 or more visits and good outcomes should alert clinicians and policy makers as to the importance of available and effective treatments in the fight against substance abuse and mental health problems. This study also showed that a supportive family member is usually the best social asset that patients and therapists have in their fight for sobriety.

[137. J Subst Abuse. 1996;8\(1\):81-91.](#)

Diagnostic and referral reliability in an alcoholism treatment network.

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University of Connecticut, USA.

Diagnostic and referral reliability were studied throughout an integrated alcoholism referral and treatment network. Diagnosticians included volunteers from an inpatient alcohol program staff, an outpatient referral network, a hospital medical staff, and a hospital administrative staff. Participant category had no influence on diagnostic reliability and only minimal influence on referral reliability. Cases involving only physical addiction to alcohol, particularly withdrawal symptoms, were more reliably diagnosed and referred than were cases involving psychosocial problems alone. Diagnostic practices included consideration of multiple problem areas for each case. Results are related to prior research findings and current directions in the diagnosis and treatment of alcohol disorders.

[138. Prev Med. 1995 Sep;24\(5\):503-8.](#)

Smokers' baseline characteristics in the COMMIT trial.

Hymowitz N, Corle D, Royce J, Hartwell T, Corbett K, Orlandi M, Piland N.

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BACKGROUND: Baseline telephone survey data from 10 COMMIT sites were submitted to statistical analyses to compare the smoking characteristics of non-Hispanic white (white), non-Hispanic black (black), Mexican-origin (Mexican), and Puerto Rican-origin (Puerto Rican) smokers. RESULTS: White men and women were more likely to be classified as "heavy smokers" than members of other racial/ethnic groups, although black and Puerto Rican smokers were more likely than whites to increase their smoking rates on weekends. Whites were less likely to report stopping smoking in the past. White and Mexican smokers were most likely to smoke light or ultralight brands and least likely to smoke menthol cigarettes. Blacks were most likely to report smoking their first cigarette of the day within 10 min of waking. CONCLUSION: The differences and similarities among different groups of smokers may have important implications for understanding patterns of tobacco-related disease in smokers from different racial/ethnic and sex groups.

[139. Sidahora. 1995 Aug-Sep:15-22.](#)

[Injecting yourself in a healthy manner].

[Article in Spanish]

Molina CN, Vidot JV.

[140. Addiction. 1995 Aug;90\(8\):1105-11.](#)

Prospective effects of perceived risk of developing HIV/AIDS on risk behaviors among injection drug users in Puerto Rico.

Robles RR, Cancel LI, Colón HM, Matos TD, Freeman DH, Sahai H.

Research Institute, Mental Health and Anti Addiction Services Administration, San Juan, Puerto Rico.

The relationship between perceived risk of developing AIDS and subsequent behavioral risk status is estimated for 1740 Puerto Rican injection drug users (IDUs). Prospective behavioral effects were examined comparing data collected at two

intervals approximately 6 months apart. We estimated the association between perceived risk at baseline and risky behaviors at follow-up with unadjusted odds ratios. We confirmed the results with adjusted odds ratios using logistic regressions which included baseline risk status as well as socio-demographic and health status covariates. The analyses showed that having a high HIV/AIDS risk perception was related to subsequent sharing of needles, injection of drugs in shooting galleries and sharing of cookers. None of the tests between risk perception and sex risk behaviors showed a significance association. Increasing IDUs' perceived vulnerability to HIV/AIDS might not be effective in helping reduce HIV risk behaviors. IDUs perceiving themselves to be at high risk of AIDS might believe there is little they can do to reverse the consequences of risky behavior.

[141. Ann N Y Acad Sci. 1995 Jun 26;749:97-118.](#)

The political economy of resistance and self-destruction in the crack economy. An ethnographic perspective.

Bourgois P.

San Francisco Urban Institute, San Francisco State University, California 94133, USA.

[142. AIDS Educ Prev. 1995 Jun;7\(3\):195-209.](#)

Effects of a community outreach program in HIV risk behaviors among injection drug users in San Juan, Puerto Rico: an analysis of trends.

Colón HM, Sahai H, Robles RR, Matos TD.

Research Institute, Puerto Rico Mental Health and Anti-Addiction Services Administration.

This report assesses the effects of a community outreach program in reducing HIV risk behaviors among injection drug users (IDUs) in San Juan, Puerto Rico. Participants were 1,113 IDUs, 88.3% of whom were also assessed at post-intervention. The analytic strategy consisted in modeling pre- and post-intervention trends in risk behavior levels from successive cohorts of IDUs. The trend analyses showed that secular trends, unrelated to the direct effects of the outreach intervention, accounted for significant portions of the reported risk reductions. Nevertheless, the post-intervention trends in the shared use of cookers and in needle bleaching showed shifts that could not be accounted for by the modeled secular trends. The outreach intervention appears to have had significant but partial effects on the behavioral risks associated to drug injection and no effect on sexual behaviors. The strengths and weaknesses of time-trend analyses for evaluating community HIV-prevention programs lacking experimental designs are discussed.

[143. NIDA Res Monogr. 1995;151:109-30.](#)

A comparison of drug use networks across three cities.

Williams ML, Zhuo Z, Siegal HA, Robles RR, Trotter RT 2nd, Jones A.

NOVA Research Company, Bethesda, MD 20814, USA.

[144. Soc Sci Med. 1995 Jan;40\(1\):91-103.](#)

Psychosocial correlates of drug use among Puerto Rican youth: generational status differences.

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This study investigates the role of several social psychological variables which could help explain the process by which Puerto Rican adolescents become vulnerable to drug use involvement with exposure to a host society, New York City, where the prevalence of drug use is higher than in the society of origin. Puerto Rico. To study how acculturation affects the psychosocial factors associated with adolescent drug use, four generational status groups of Puerto Rican students living in two settings--New York City and San Juan, Puerto Rico--were surveyed: New York Ricans (New York City-born Puerto Ricans); New York migrants (island-born Puerto Ricans living in New York); Puerto Rican islanders (adolescents who had never lived outside of Puerto Rico); and Puerto Rican immigrants (New York City-born youngsters of Puerto Rican parentage whose families had returned to live on the Island). A theoretical model developed to explain adolescent problem behavior, which posits a continuum of antecedent, intrapersonal, interpersonal and perceived environment dimensions theoretically conducive to adolescent drug use, guided the analysis. Analysis of variance was used to test for generational status group differences in each of the psychosocial risk factors. The relationship between generational

status, the intervening psychosocial variables, and drug use were explored through multiple regression analyses. The data showed that Puerto Rican youth's generational status was systematically related to differences in the occurrences of the social psychological risk factors for adolescent drug use involvement. With greater exposure to the New York City environment, Puerto Rican youngsters were more likely to report problems in parental socialization, personal control and perceived environment domains. Each of the psychosocial characteristics was associated with the students' drug use involvement, and these relationships were conditioned by generational status. New York Ricans exhibited the greatest susceptibility to drug use involvement in the presence of weakening of parental controls, increased tolerance of deviance and drug use, increased unconventionality with respect to school and church, and peer use of legal and illegal drugs. Sociodemographic and psychosocial variables together explained 47% of the variance in the drug use involvement of Puerto Rican adolescents.

[145. Int J Addict. 1994 Oct;29\(12\):1499-518.](#)

An evaluation of drug injection behaviors and HIV infection. National AIDS Research Consortium.

Zhuo Z, Williams M, Bell D.

Affiliated Systems Corporation, Houston, Texas 77027-6022.

This paper investigates domains of drug injection behavior and the association of derived factors to HIV serostatus. Two sets of data were randomly selected and matched from a national data set of over 40,000 drug injectors. One set was HIV seropositive and the other HIV seronegative heterosexual injectors. Samples were matched to control for the effects of race/ethnicity, gender, and age on serostatus. Factor analysis was used to investigate relationships among drug injection behaviors. Four independent factors were found. Two factors were found to be statistically related to HIV serostatus in high seroprevalence areas. None of the needle use factors was found to be significantly associated with serostatus in low seroprevalence areas.

[146. Int J Epidemiol. 1994 Jun;23\(3\):595-601.](#)

Behavioural risk factors and HIV infection of injection drug users at detoxification clinics in Puerto Rico.

Robles RR, Colón HM, Díaz N, Cancel LI, MacGowan R, Cole GE, Allen DM.

Research Institute, Puerto Rico Department of Anti Addiction Services, Rio Piedras 00928-1414.

BACKGROUND: The ethnic and geographical variations of AIDS prevalence among injection drug users (IDU) have highlighted the need to understand the role of the relevant risk factors in specific subpopulations of IDU. In this study we examine the factors related to seropositivity among IDU entering drug detoxification facilities in metropolitan San Juan, Puerto Rico. METHODS: From October 1990 until August 1991, 390 IDU were interviewed. Four groups of risk factors were examined: sexual practices, drug injection behaviours, risk behaviours while in US Mainland cities, and while incarcerated. A stepwise logistic regression model was used to simultaneously assess the independent effects of the behavioural risk factors on HIV seropositivity. RESULTS: Of the 342 IDU who were tested for HIV antibodies, 29.5% were seropositive. The behaviours found to be associated with seropositivity were: having sex with an IDU in the last 6 months; having injected drugs for over 5 years; and injecting with used needles while incarcerated. DISCUSSION: Public health programmes will need to establish more effective collaborative links with correctional institutions in order to reduce the spread of HIV among IDU in Puerto Rico.

[147. P R Health Sci J. 1994 Jun;13\(2\):153-8.](#)

HIV/AIDS risk perception, HIV risk behaviors, and HIV seropositivity among injection drug users in Puerto Rico.

Cancel LI, Robles RR, Colón HM, Matos TD, Freeman DH.

Research Institute, Mental Health and Anti Addiction Services Administration, Commonwealth of Puerto Rico, San Juan 00928-1414.

This paper assesses the factors related to self perception of developing AIDS among a group of 1,568 Puerto Rican injection drug users (IDUs). Incarceration history, years of drug injection, sharing needles, renting and borrowing needles, sharing rinse water or cooker, and having an IDU sex partner yielded a moderate association with HIV/AIDS risk perception. Use of sterile needles, shooting drugs alone, having had previous treatment episodes, and all the variables

related to health status were also moderately associated with HIV/AIDS risk perception. A logistic regression model based on backwards elimination procedure, which included statistically significant variables in the bivariate analyses, yielded the variables living with children, sex with an IDU partner, shooting drugs alone, perception of health, having had a sexually transmitted disease, and results of HIV testing as statistically significant ($p < 0.05$).

[148. AIDS. 1994 May;8\(5\):681-7.](#)

HIV risk factors among injecting drug users in five US cities.

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National Institute on Drug Abuse, Rockville, MD 20857.

OBJECTIVES: To examine factors associated with HIV infection in injecting drug users (IDU), the independent and interactive effects of potential risk factors, and geographic differences in risk factors. **METHODS:** IDU entering methadone treatment in New York City, Asbury Park and Trenton in New Jersey, Baltimore and Chicago between February 1987 and December 1991 were interviewed using a standard questionnaire and tested for HIV antibodies ($n = 4584$). Associations of HIV serostatus with race/ethnicity, other demographic characteristics, and injecting and sexual risk behaviors were assessed by logistic regression analyses. **RESULTS:** African Americans were at increased risk for HIV in four of the five cities, and Puerto Ricans in two cities. Injection in shooting galleries and 'speedball' injection emerged as behavioral variables highly associated with HIV, although interaction of these variables indicates that each variable contributes to HIV risk only in the absence of the other behavior. **CONCLUSIONS:** Geographic differences in HIV risk factors and the interaction of 'speedball' and shooting gallery use suggest that multiple HIV risk models are needed that reflect seroprevalence rates, variation in risk behaviors, and the social context of risk behaviors. Increased risk among racial/ethnic minorities independent of risk behaviors, suggests the need to examine further potential social and environmental factors, such as the social networks in which injecting and sexual behaviors occur, HIV seroprevalence within these networks, and the locales in which risk behaviors occur.

[149. Int J Aging Hum Dev. 1994;39\(2\):97-103.](#)

Aging and generational patterns of alcohol consumption among Mexican Americans, Cuban Americans and mainland Puerto Ricans.

Black SA, Markides KS.

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The relationship between aging and drinking among U.S. Hispanics is not well understood. The present study used data from the Hispanic Health and Nutrition Examination Survey to describe life-course patterns of alcohol consumption among Mexican Americans, Cuban Americans, and Puerto Ricans residing in the mainland United States. Age differences in patterns of consumption among Mexican American and Puerto Rican males were found to reflect aging effects, as evidenced by increasing percentages of former drinkers coupled with consistently low percentages of abstainers at all ages. Among Cuban males, cohort effects were evidenced for middle-aged and older men by a continuation of low rates from younger years, as well as a sharp difference between the rates of the middle-aged and older cohorts and those of the younger cohort. Age differences among all three groups of females were found to reflect cohort effects, as evidenced by large proportions of life-long abstainers across all age cohorts.

[150. J Vet Diagn Invest. 1993 Jul;5\(3\):488-94.](#)

Cycad (*Zamia puertoricensis*) toxicosis in a group of dairy heifers in Puerto Rico.

Reams RY, Janovitz EB, Robinson FR, Sullivan JM, Rivera Casanova C, Más E.

Indiana Animal Disease Diagnostic Laboratory, Purdue University, West Lafayette 47907.

[151. Soc Sci Med. 1993 Jul;37\(1\):15-25.](#)

Knowledge for use: anthropology and community-centered substance abuse research.

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The anthropological world has changed. The ethnographic Other is no longer available and pliant, awaiting anthropological representation, but has acquired a voice of his/her own. As a result, anthropology is faced with a dilemma. What is to be the anthropological role in this transformed world? Two alternatives are examined. The first,

postmodernism, stresses the development of experimental ethnographic texts that inscribe the voice of the transformed Other. Noting the weaknesses of the postmodern 'solution,' this paper proposes community-centered research as a more appropriate response to contemporary social realities. In this approach, the anthropologist seeks collaboration with the Other in the struggle for self-determination. Illustration is provided with the case study of anthropologists employed in a Puerto Rican community based organization (CBO), with specific reference to the emergence and development of the substance abuse prevention and treatment work of this CBO. While noting the difficulties of this role, the paper argues that scholarly activism, a model adopted from the Third World, is well suited to the postmodern world.

[152. P R Health Sci J. 1993 Apr;12\(1\):7-12.](#)

HIV risk behaviors and HIV seropositivity among young injection drug users.

Marrero Rodríguez CA, Robles RR, Colón HM, Freeman DH, Matos TD, Reyes JC.

Research Institute, Puerto Rico Department of Anti-Addiction Services, Hato Rey 00928-1414.

Although injection drug use (IDU) is the major risk category for HIV infection in Puerto Rico and injection drug users start their drug injection careers very young, there is little information related to drug injection patterns of young IDUs. In this paper we report on factors found to be associated with HIV seropositivity among 255 young IDUs (16-24 years old). Overall, 23.5% subjects were HIV seropositive. Being 22 to 24 years old, having dropped out of school, having a history of incarceration, and having been diagnosed with STDs, and initiating drug use injection before 17 years of age were the factors significantly related to HIV seropositivity. Findings suggest that prevention programs should begin early in the development of youngsters. Special HIV and STD preventive programs for youngsters at risk of leaving school before completing high school should be a priority.

[153. P R Health Sci J. 1993 Apr;12\(1\):27-34.](#)

Effects of a HIV risk reduction education program among injection drug users in Puerto Rico.

Colón HM, Robles RR, Freeman D, Matos T.

Research Institute, Puerto Rico Department of Anti Addiction Services, Río Piedras 00928-1414.

This report examines the extent to which an educational component enhanced the efficacy of a community outreach program in reducing HIV transmission behaviors among injecting drug users (IDUs). The experimental enhancement comprised three group educational sessions where detailed information on HIV risk and protective behaviors was conveyed, protective behaviors were shown and practiced, and a problem solving perspective guided discussion of serostatus results. Substantial risk reduction in behaviors were prospectively measured. However, IDUs assigned on a random basis to the enhanced intervention showed no significant differences in levels of risk reduction when compared to those assigned to the standard-only intervention. The chronic and intensive use of injected drugs among the IDUs studied and their high level of HIV infection suggest the need of interventions geared to maximize the utilization of health care services and enhance the supportive functions of familial and social networks of IDUs.

[154. P R Health Sci J. 1993 Apr;12\(1\):19-25.](#)

Human immunodeficiency virus infection and risk behaviors among injection drug users in four Puerto Rican communities.

Reyes JC, Robles RR, Colón HM, Matos TD, Sahai H, Freeman DH.

Dept. of Anti Addiction Services, Commonwealth of Puerto Rico, San Juan.

This study compares the prevalence of human immunodeficiency virus (HIV) infection and HIV risk behaviors among 1,702 injection drug users (IDUs) recruited within four catchment areas in metropolitan San Juan (79.9% male and 20.1% female). To assess the impact of different antecedent variables on intercommunity risk differences, we constructed separate logistic regression models for each one of the catchment areas in the analysis. Old San Juan/Santurce has the highest rate of HIV seropositivity. Furthermore, Old San Juan/Santurce IDUs were more likely to have had incarceration experience, to report using drugs only by injection, and to have been injecting drugs for 16 years or more. Also, this group was more likely to report practicing prostitution and to have been diagnosed with sexually transmitted diseases (STDs) than their peers from the other sites. The need of preventive programs in specific communities within metropolitan urban areas is discussed.

[155. P R Health Sci J. 1993 Apr;12\(1\):13-7.](#)

Incarceration history as a risk factor for HIV infection among Puerto Rican injection drug users.

Robles RR, Marrero CA, Freeman DH, Colón HM, Matos TD, Sahai H.

Puerto Rico Department of Anti Addiction Services/Center for Evaluation and Sociomedical Research, School of Public Health, University of Puerto Rico, San Juan.

This study assesses factors associated with incarceration history and HIV seropositivity among 1,700 out-of-treatment drug injectors recruited in Puerto Rico between 1989-1990 from health care centers, emergency rooms, copping areas, shooting galleries, bars, billiard rooms and street corners. Analysis links incarceration history with criminal involvement and chronic drug use. After controlling for sociodemographics and previously reported correlates of HIV status, regression analysis shows incarceration history significantly relates to HIV status. The only predictor of incarceration history not related to HIV status was illegal activity as a major source of income. Analysis emphasizes HIV prevention programs within the penal system.

[156. Int J Addict. 1993 Mar;28\(4\):327-54.](#)

Vulnerabilities and cultural change: drug use among Puerto Rican adolescents in the United States.

Szalay LB, Canino G, Vilov SK.

Institute of Comparative Social and Cultural Studies, Inc., Chevy Chase, Maryland 20815.

The investigations examined drug usage-based and culture-based differences in young Puerto Ricans living in New York (100 nonusers and 192 drug users), Americans living in New York (100 nonusers and 99 drug users), and Puerto Ricans living in Puerto Rico (100 nonusers and 98 drug users). The Associative Group Analysis method was used to measure cultural change in three dimensions: dominant perceptions, priorities, and evaluations. The findings show that the Puerto Rican drug user and nonuser groups in New York differed significantly in their paths of acculturation. The nonusers were shown to progress successfully in learning American meanings and adopting American perspectives and cultural norms. The drug users were attracted to dominant American priorities (e.g., wealth and freedom) but showed little progress in adopting deeper American cultural meanings necessary for effective coping.

[157. Am J Public Health. 1993 Feb;83\(2\):194-200.](#)

Drug abuse and illicit drug use in Puerto Rico.

Canino G, Anthony JC, Freeman DH Jr, Shrout P, Rubio-Stipec M.

Behavioral Sciences Research Institute, School of Medicine, University of Puerto Rico, San Juan.

OBJECTIVES: Based on an epidemiologic field survey of community households in Puerto Rico, this study estimates the frequency of illicit drug use and clinically defined drug abuse and/or dependence syndromes. Results are compared with those from surveys on the United States mainland. Suspected risk factors are studied as well, with a special focus on childhood misbehavior. **METHODS:** Trained lay interviewers administered a Spanish Diagnostic Interview Schedule to 912 respondents aged 17 to 68 years who were selected by multistage probability sampling of island households. **RESULTS:** An estimated 8.2% of the population had a history of illicit drug use and 1.2% qualified for a standardized lifetime diagnosis of drug abuse, dependence, or both. An estimated 18.4% of the male drug users and 7.7% of the female drug users met criteria for drug abuse and/or dependence. A history of drug use was related to the diagnoses of alcohol abuse and/or dependence and antisocial personality, but few persons who had used illicit drugs at least once in their lifetime reported a history of receiving treatment for alcohol, drug, or mental health problems. **CONCLUSIONS:** The data were consistent with a suspected association between level of childhood misbehavior and occurrence of illicit drug use, even after statistical control for potentially confounding variables.

[158. NIDA Res Monogr. 1993;130:8-31.](#)

Integrating mainstream and subcultural explanations of drug use among Puerto Rican youth.

Rodriguez O, Recio Adrados JL, de la Rosa MR.

Sociology/Anthropology Department, Fordham University, Bronx, NY 10458.

[159. NIDA Res Monogr. 1993;130:79-101.](#)

Interactional theory: its utility in explaining drug use behavior among African-American and Puerto Rican youth.

Brook JS.

Department of Psychiatry, New York Medical College, Valhalla 10595.

[160. Health Educ Q. 1993 Winter;20\(4\):523-38.](#)

Findings from the Horizontes Acquired Immune Deficiency Syndrome Education project: the impact of indigenous outreach workers as change agents for injection drug users.

Birkel RC, Golaszewski T, Koman JJ 3rd, Singh BK, Catan V, Souply K.

Koba Institute, Washington, DC 20005.

A human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) intervention using indigenous outreach workers was implemented with Hispanic injection drug users (IDUs) and their sexual partners in three locations: Laredo, Texas; San Diego, California; and San Juan, Puerto Rico. A total of 2,169 subjects were contacted, given health education, HIV antibody testing, and follow-up counseling. This article reports on the 1,616 IDUs (75%) who completed the initial and follow-up interviews. The results indicated significant increases in health knowledge on AIDS, decreases in needle risk drug taking behaviors, some decreases in sex risk behaviors, and more realistic perceptions of personal AIDS risk. Using multivariate analyses, gender (male) and increasing age (older than age 25 years) were the strongest predictors of behavior change. Surprisingly, the identification of a positive HIV serostatus was not a significant predictor of behavior change. Although intended as a comparison study between contrasting levels of intervention, logistical and administrative problems undermined the use of a true quasi-experimental design. Nonetheless, the results from this research suggest that the use of indigenous outreach workers is an effective means of combatting the spread of HIV in this difficult to reach population. Some programmatic recommendations are provided for future efforts of this kind, particularly in relation to role conflicts experienced by outreach workers.

[161. AIDS Educ Prev. 1993 Fall;5\(3\):196-211.](#)

Racial differences in sexual behaviors related to AIDS in a nineteen-city sample of street-recruited drug injectors. NADR Consortium.

Friedman SR, Young PA, Snyder FR, Shorty V, Jones A, Estrada AL.

National Development and Research Institutes, Inc., New York, NY 10013.

Questionnaire data from almost 12,000 street-recruited drug injectors in 19 cities were analyzed to determine racial differences that may affect transmission of the human immunodeficiency virus (HIV). Self-reported sexual behaviors of drug injectors differ by city-type. White male drug injectors reported less unprotected vaginal sex than black or Latino males in multicultural--black/white/Mexican-origin and biracial cities. Black drug users of both sexes were less likely than white or Latino drug users to report unprotected and sex in multicultural--black/white/Mexican-origin and multicultural--black/white/Puerto Rican cities. The reported percentage of sex acts in which a condom was used was similar for black, white, and Puerto Rican men, and for black and white women, in all city types, but Puerto Rican women reported more condom use than black women. Mexican-origin drug injectors of each gender were least likely to report using condoms in multicultural--black/white/Mexican-origin cities. Black drug injectors are particularly likely to report having sex partners who do not inject drugs, as are Puerto Rican men and as are whites in multicultural--black/white/Mexican-origin cities. High-risk sex without condoms is widely reported among all groups of drug injectors studied: Each racial/gender group in each city-type averaged 15 or more episodes of unprotected vaginal sex per month, and 10% of most subgroups report having anal sex within the past 6 months. At least 45% of subjects in each city-type reported sex with noninjectors of the opposite gender. Without continued and expanded intervention, these data are consistent with HIV spreading to drug injectors, their sexual partners, and their future children, in all racial/ethnic groups.

[162. Genet Soc Gen Psychol Monogr. 1992 Nov;118\(4\):417-38.](#)

African-American and Puerto Rican drug use: personality, familial, and other environmental risk factors.

Brook JS, Whiteman M, Balka EB, Hamburg BA.

Department of Psychiatry and Behavioral Sciences, New York Medical College.

Using a family interactional theoretical framework giving primacy to the mutual attachment between parent and child, we examined the interrelationship of acculturation, ecological factors, family, personality, peers, and drug context domains with drug use in an inner city sample. We also assessed the extent to which family protective factors mitigated against risks for drug use from most of the other domains. The sample consisted of 695 African-American and 637 Puerto Rican 7th-10th graders who answered the questionnaire while listening to it on personal tape players in their classrooms. The results of hierarchical regression analyses sufficiently supported the hypothesized sequence of interrelationships in both ethnic groups to substantiate our developmental model of drug use. We also found protective buffers common to both ethnic groups and buffers specific to each group. The implications of the results for targets and timing of intervention in the path to drug use are discussed.

[163. Psychol Rep. 1992 Aug;71\(1\):179-82.](#)

Sequences of drug involvement in African-American and Puerto Rican adolescents.

Brook JS, Hamburg BA, Balka EB, Wynn PS.

Department of Psychiatry, New York Medical College, Valhalla 10595.

This study examined stages in drug involvement of 695 African-American and 637 Puerto Rican adolescents. Analysis indicated that adolescents progress through several stages of drug involvement: beer/wine, cigarettes or hard liquor, then marijuana, and, finally, illicit drugs other than marijuana. The sequence of drug involvement for both ethnic groups appears to be both unidimensional and cumulative.

[164. Br J Addict. 1992 Apr;87\(4\):585-90.](#)

Changes in HIV risk behaviors among intravenous drug users in San Juan, Puerto Rico.

Colón HM, Rivera Robles R, Sahai H, Matos T.

Research Institute, Puerto Rico Department of Anti Addiction Services, Rio Piedras 00928-1414.

Strategies for reaching intravenous drug users (IVDUs) not in treatment and reducing risk behaviors are urgently needed to reduce the human immunodeficiency virus (HIV) epidemic. Of special concern is the need to detect which types of risk behaviors are more likely to change and which are resistant to change. The present paper analyzes changes occurring in HIV transmission risk behaviors among 778 IVDUs not in treatment, in the city of San Juan, Puerto Rico. Results show discontinuation rates of risk behaviors to be substantial. Discontinuation rates of injection equipment sharing practices varied from 33% in shared use of cookers to 74.2% in sharing needles with strangers. Drug injection and use of shooting galleries were also reduced, although to a lesser extent (8.5% and 19.3% respectively). Among protective behaviors, use of new needles was found to increase nearly twice as much as the use of bleach (20.6% vs. 11.3% respectively). The results suggest the need to understand the factors facilitating/inhibiting change in specific behaviors and the need to study the stability of these changes over longer periods of time.

[165. Am J Epidemiol. 1992 Mar 1;135\(5\):531-40.](#)

Behavioral risk factors and human immunodeficiency virus (HIV) prevalence among intravenous drug users in Puerto Rico.

Robles RR, Colón HM, Sahai H, Matos TD, Marrero CA, Reyes JC.

Research Institute, Puerto Rico Department of Anti-Addiction Services, Rio Piedras.

This study reports on four empirical models likely to contribute to understanding the behaviors linked with human immunodeficiency virus (HIV) among intravenous drug users. The sample comprises 1,637 intravenous drug users recruited between May 1989 and June 1990 in San Juan, Puerto Rico. Adjusting for sociodemographics, four logistic regression models were constructed to assess the association of risk behaviors with HIV seropositivity. In model 1, the variables found to be significantly associated with HIV seropositivity were injecting four times a day, injection as the only route of consuming drugs, and years of injection. In model 2, the only risk behavior significantly associated with HIV seropositivity was injecting drugs in shooting galleries. In model 3, all sex risk variables failed to meet the adjusted level of significance. In model 4, pneumonia, hepatitis, and syphilis were significantly linked with HIV infection. In order to

assess the individual effects of the significant variables in each one of the four models, a logistic regression analysis was performed simultaneously controlling for all of the variables. After adjustment for the Bonferroni correction, age group 25-34 years, injection as the only route of using drugs, number of years of injection, and syphilis were the only significant variables remaining.

[166. Med Anthropol. 1992 Mar;14\(1\):77-108.](#)

Why does Juan García have a drinking problem? The perspective of critical medical anthropology.

Singer M, Valentín F, Baer H, Jia Z.

Hispanic Health Council, Hartford, CT 06106.

[167. P R Health Sci J. 1991 Aug;10\(2\):83-8.](#)

HIV risk and prior drug treatment among Puerto Rican intravenous drug users.

Colón HM, Robles R, Sahai H.

Department of Anti Addiction Services, Río Piedras, PR 00928.

HIV transmission through sharing of drug injection paraphernalia is the single largest mode of infection in Puerto Rico. Of special concern to health professionals is the lack of information related to HIV risk behavior and lifestyles of IVDU's not in drug treatment. The paper analyzes the extent to which 862 currently active IVDU's in Puerto Rico had utilized drug treatment services and the differences between IVDU's with and without prior treatment history. Results show that two thirds of the IVDU's had been previously enrolled in drug treatment on an average of three times and a median per episode length of stay of 3 weeks. A step-wise discriminant analysis revealed that the number of years of drug injection previous incarceration, self-reported previous diagnoses of hepatitis and living with parents are relevant discriminating factors between treatment utilizers and non-utilizers. Policy implications of the results are also discussed.

[168. Bol Asoc Med P R. 1991 Jul;83\(7\):296-9.](#)

Mercury contamination in Puerto Rico: the Ciudad Cristiana experience.

Pérez-Comas A.

Ponce Medical School, Mayagüez, P.R. 00709.

Mercury contamination constitutes a serious health problem. Several ecological accidents have occurred in the world due to industrial contamination and consumption of mercury contaminated food. This article summarizes the increased absorption levels of mercury among dwellers of Ciudad Cristiana Housing Project in Humacao, Puerto Rico confirming the exposition to the metal as documented by sediment analysis of the area performed by the Puerto Rico Environmental Quality Board. This obliged the local government to remove the dwellers from the area because of the probable health hazard.

[169. Public Health Rep. 1991 May-Jun;106\(3\):297-304.](#)

Building skills of recovering women drug users to reduce heterosexual AIDS transmission.

Schilling RF, el-Bassel N, Schinke SP, Gordon K, Nichols S.

Columbia University School of Social Work, New York, NY 10025.

Although most women infected with HIV are intravenous drug users, some contact the virus through sexual contact with IV drug users. To reach at-risk women, public health officials must develop a range of prevention strategies. One approach, skills training, holds promise as a means of altering risk-related sexual behavior. In this study, 91 women methadone patients were pretested and randomly assigned to an information-only control group or a skills-building intervention group. Skills-building intervention consisted of five sessions of small groups in which participants identified their own high risk sexual behaviors, discussed their negative associations with condoms, and practiced skills which involved asking partners to use condoms. Compared with members of the control group, respondents in the intervention group reported that they initiated discussion of sexual issues with their partners more frequently, felt more comfortable talking with them about safer sex, and reported using and carrying condoms more frequently. The high rates of attendance and program retention by skills-building participants suggest that such groups may be supportive and useful in the design of risk reduction and drug abuse treatment programs. The modest outcomes of this study underscore the difficulty of altering risk behavior but also serve as a basis for future AIDS prevention studies.

[170. J Stud Alcohol. 1991 Jan;52\(1\):78-88.](#)

Children of alcoholic parents in the community.

Rubio-Stipeć M, Bird H, Canino G, Bravo M, Alegria M.

University of Puerto Rico, San Juan 00937.

The relationship between parental alcoholism and risk for maladjustment in the offspring was investigated in a community sample. Children of parents who met criteria for DIS/DSM-III alcohol abuse or dependence and children of parents who met criteria for ten other diagnoses were compared to children of "normal" parents. The data were obtained from the merging of the data banks of two major psychiatric epidemiology studies of the adult (17-64) and child (4-16) population of Puerto Rico. Results indicated that parental alcoholism in addition to creating an adverse family environment had an effect on the relative risk for maladjustment in the offspring (as measured by scores on the Child Behavior Checklist). Although previous studies have reported higher levels of externalizing behaviors in children of alcoholics, an increased risk for internalizing symptoms was observed in the children studied. Similar findings were obtained for the children of parents with other psychiatric disorders suggesting that the effects of parental alcoholism in children ages 4 to 16 may not be different from the consequences of parental mental illness per se.

[171. Med Law. 1991;10\(3\):269-73.](#)

Hispanics in Chicago: chemical dependency and the law.

Toch E.

[172. J Psychoactive Drugs. 1991 Jan-Mar;23\(1\):83-4.](#)

Substance abuse, post-traumatic stress, and ethnicity.

Wilcox JA, Briones DF, Sues L.

Department of Psychiatry, Texas Tech University School of Medicine, El Paso.

[173. Am J Public Health. 1990 Dec;80 Suppl:54-60.](#)

Acculturation and marijuana and cocaine use: findings from HHANES 1982-84.

Amaro H, Whitaker R, Coffman G, Heeren T.

School of Public Health, Boston University School of Medicine, Massachusetts, USA.

We examined the relation between acculturation and illicit drug use among Hispanics in the United States employing data from the 1982-84 Hispanic Health and Nutrition Evaluation Survey (HHANES). Across all Hispanic groups, acculturation into US society, as reflected in English language use, was associated with higher rates of illicit drug use even after sociodemographic variables such as gender, age, income, and education were considered. Significant interactions between language and education indicated that the predominant use of English was more strongly associated with marijuana and cocaine use among Mexican Americans and Puerto Ricans of lower educational attainment than among those of higher educational attainment. Significant interactions between language use and other factors such as sex, marital status, and place of birth were also associated with marijuana and cocaine use. These results suggest that the experience of acculturation, especially as it relates to drug use, is closely tied to the social and economic context in which an individual lives.

[174. Bol Asoc Med P R. 1990 Dec;82\(12\):523-7.](#)

AIDS risk behavior patterns among intravenous drug users in Puerto Rico and the United States.

Robles RR, Colón HM, Matos TD, Marrero CA, López CM.

Research Institute, Puerto Rico Department of Anti-Addiction Services, Rio Piedras 00928-1414.

We interviewed 385 IV drug users recruited in the streets of the San Juan metropolitan area and compared our findings with comparable results from projects in the United States. As expected, intravenous (IV) drug users, irrespectively of the race or ethnic group they belong to or the geographical setting in which they live, are still practicing HIV risk behaviors. Overall, IV drug users in this analysis are young, however, both Puerto Rican and Hispanic groups have completed less years of school than Blacks and Whites in the United States. The fact that almost half of Puerto Rican IV drug users in the United States reported illegal activities as a source of income surprised investigators. However, as

hypothesized by investigators, almost half of the Island's IV drug users reported to live with parents. Puerto Rican IV drug users are still practicing HIV risk behaviors, they inject drugs and use shooting galleries to inject drugs more frequently, and are less likely to clean needles and use condoms than Puerto Ricans in the U.S., Blacks and Whites. It is a well known fact that intravenous drug users are the largest group at risk for the acquired immunodeficiency syndrome (AIDS) in Puerto Rico and among Puerto Ricans in the United States. IV drug users are also the major risk for heterosexual transmission and main source of perinatal transmission of the disease. Thus, resources for preventing AIDS in Puerto Rico are needed most among IV drug users, where 44.5 of the subjects in this study are HIV positive.

[175. Am J Hosp Pharm. 1990 Nov;47\(11\):2520-2.](#)

Use of psychoactive drugs for nontherapeutic reasons by pharmacy students in Puerto Rico.

Chavez ML, Chavez PI.

Department of Pharmacy Practice, University of Puerto Rico, San Juan 00936.

[176. Nature. 1990 Oct 18;347\(6294\):623.](#)

Domestic mercury pollution.

Wendroff AP.

Comment in Nature. 1991 Feb 28;349(6312):746-7. Nature. 1994 Jan 13;367(6459):110.

[177. Bol Asoc Med P R. 1990 Sep;82\(9\):412-5.](#)

Prognostic factors in patients with IVDA and bacteremia.

Arizmendi A, Cantellops D, Figueroa W, Vila S, Hunter-Mellado R.

Department of Medicine, Ramón Ruíz Arnau, University Hospital, School of Medicine, Universidad Central del Caribe. The medical records of all the patients with bacteremia and recent use of illicit intravenous drugs admitted to Hospital Universitario Ramón Ruíz Arnau from January 1, 1988 to June 30, 1989 were reviewed. It consisted of 28 records, 21 of which were male patients and 7 females. The mortality rate among these patients was 46%. Staphylococcus aureus was the most common pathogen recovered from blood cultures. All the S. aureus were methicillin sensitive. The presence of clinical sepsis, a low Karnofsky performance status at the time of admission and multiorgan abnormalities were the most important prognostic factors that determined outcome in these patients.

[178. Arch Gen Psychiatry. 1990 Apr;47\(4\):313-9.](#)

Alcoholism--North America and Asia. A comparison of population surveys with the Diagnostic Interview Schedule.

Helzer JE, Canino GJ, Yeh EK, Bland RC, Lee CK, Hwu HG, Newman S.

Department of Psychiatry, Washington University School of Medicine, St Louis, MO 63110.

The Diagnostic Interview Schedule (DIS) is a highly structured instrument that enables lay examiners to gather the clinical information necessary to generate psychiatric disorders according to the DSM-III, Feighner, and Research Diagnostic Criteria. It was developed originally as the diagnostic interview for the Epidemiologic Catchment Area (ECA) survey. Because it adheres to DSM-III and can be used by lay interviewers, thus making it practical for studies involving large samples, it has been used for other population surveys in North and South America, Europe, and Asia. This investigation compares the epidemiology of DSM-III-defined alcohol abuse and addiction in DIS-based population surveys cross-nationally (in St Louis, Mo; Edmonton, Canada; Puerto Rico; Taipei City, Taiwan; and South Korea). We found considerable variation in the lifetime prevalence of alcoholism but a similarity in the age of onset, the symptomatic expression, and the associated risk factors. We also found an inverse correlation between the prevalence of alcoholism and the strength of the association of the risk factors we examined. The work described herein demonstrates the utility of consistent definition and method in cross-cultural psychiatric research. The substantive findings have implications for the definition of alcoholism and for a better understanding of genetic and environmental interactions in its etiology.

[179. P R Health Sci J. 1990 Apr;9\(1\):99-104.](#)

Social relations and empowerment of sexual partners of i.v. drug users.

Rivera Robles R, Manuel Colón H, González A, Mateos T.

This paper examines social relations and roles of women sexual partners of IV drug users. It is argued that the Island socio-cultural environment does not provide the socio-structural conditions for individuals to organize groups and get the power to solve community problems. It is further assumed that individuals have resources in some of the positions they occupy. Therefore, ascertaining which resources are prevalent in which positions will allow interventionists to start the empowerment process. The data shows that IV drug users' sexual partners have a steady income from food stamp programs. They support the family, are heads of households, and are responsible for child rearing. The paper discusses how these resources can be used to start women getting the power to solve their problems and consequently prevent HIV transmission.

[180. P R Health Sci J. 1990 Apr;9\(1\):147-9.](#)

[Julia de Burgos' subjectivity and praxis: an approach to the social creation of her health].

[Article in Spanish]

Zavala Martínez I.

[181. Am J Drug Alcohol Abuse. 1990;16\(1-2\):97-107.](#)

Factors in mortality by drug dependence among Puerto Ricans in New York City.

Shai D, Aptekar L.

Department of Sociology, Villanova University, Pennsylvania 19085.

This paper presents data on mortality by drug dependence among Puerto Rican residents aged 15-44 of New York City. While men show death rates for drug dependence several times those of women, when deaths by drug dependence are calculated as a proportion of all deaths, the ratios are nearly the same for both sexes. Factors relevant to analyzing mortality statistics on drug dependence in this population are an undercount of Puerto Rican males and competing causes of death, particularly homicide among men. Factors influencing deaths by drugs are gender roles as they influence patterns of drug use and types of chronic use: regular and intermittent.

[182. NIDA Res Monogr. 1990;93:24-34.](#)

The Puerto Rican intravenous drug user.

Serrano Y.

ADAPT, Brooklyn, NY 11201.

[183. Bol Asoc Med P R. 1989 Apr;81\(4\):134-6.](#)

A naturalistic analytic study of veterans using naltrexone in Puerto Rico.

Santos EF.

Clinical records of eighteen patients on Naltrexone and 13 patients who dropped out of a Naltrexone maintenance activity were studied at random to delineate the biopsychosocial characteristics of greater clinical relevance to an outpatient rehabilitation program. Their similarities and differences were described. Some hypothesis that may prove to be great clinical benefit were presented. A striking finding was the greater capacity of the Naltrexone group to have a stable marital relationship (P less than 0.01) as compared with the group who abandoned treatment.

[184. Soc Sci Med. 1989;29\(6\):779-89.](#)

Drug use among Puerto Rican youth: an exploration of generational status differences.

Velez CN, Ungemack JA.

Division of Sociomedical Sciences, School of Public Health, Columbia University, New York, NY 10032.

An analysis of the relationship between generational status, or a migrational experience, and adolescent drug use takes advantage of a natural experiment--the migration of Puerto Ricans to the continental United States and their immigration back to the island. Although researchers have studied different sources of variation in adolescent drug use behavior, few have examined the drug use experience of the same ethnic group in varying sociocultural settings. The present study focused on the drug use involvement of four generational status groups of Puerto Rican adolescents in two different settings--New York City and San Juan, Puerto Rico. The groups surveyed in New York City were: New York

Ricans (New York City-born Puerto Ricans) and New York migrants (island-born Puerto Rican adolescents). The two groups identified in Puerto Rico were: Puerto Rican islanders (adolescents who had never lived outside of Puerto Rico) and Puerto Rican immigrants (New York City-born youngsters of Puerto Rican parentage whose families had returned to live on the island). In this study, it was hypothesized that the more the perceived environment dimensions of the different generational status groups have characteristics conducive to drug use, the greater the drug use involvement of the groups will be. The analysis confirmed that the drug use involvement of the four groups of Puerto Rican adolescents paralleled the exposure of the groups to a host society, New York City, which has a higher prevalence of adolescent drug use than the culture of origin, Puerto Rico. In addition, it was found that the longer New York migrants lived in New York City, the greater was their drug use involvement. The roles of various other sociodemographic factors (i.e. gender, grade level, family structure and socioeconomic status) in relation to adolescent drug use were also investigated. Two important conditional relationships were documented. First, the impact of length of time living in New York City varied with the adolescent's gender, with higher risk of drug involvement observed for female migrants. Second, socioeconomic status was associated with Puerto Rican adolescents' drug use involvement in the New York City subgroups, but not among the students in Puerto Rico.

[185. Alcohol Alcohol. 1989;24\(1\):11-9.](#)

Longevity among ethnic groups in alcoholic liver disease.

Mendenhall CL, Gartside PS, Roselle GA, Grossman CJ, Weesner RE, Chedid A. Veterans Administration Medical Center, Cincinnati, OH.

As part of a multicenter V.A. Cooperative Study, 437 male veterans with varying stages of alcoholic liver injury were followed over a 4.5 year period. Their ethnic distribution consisted of 256 Caucasians, 109 black Afro-Americans, 63 Puerto Rican Hispanics, and 9 Native American Indians. Survival analyses revealed significant differences between groups ($P = 0.0002$): 66% of Afro-Americans were still living at 42 months; Caucasians were intermediate with 40% survival; and only 28% of Hispanics were alive. The number of Native American Indians enrolled was too small to draw conclusions but none of those enrolled survived beyond 24 months. Survival regression analysis of 30 clinical, laboratory, histologic and nutritional parameters, revealed the following significant risk factors: clinical severity (P less than 0.0001), histologic severity (P less than 0.0001), race ($P = 0.001$), age ($P = 0.002$), BUN ($P = 0.01$) and ALT ($P = 0.02$). These analyses indicated that ethnicity, independent of other variables, is significantly associated with outcome from the disease.

[186. J Med Educ. 1988 Oct;63\(10\):759-61.](#)

Substance abuse policies and programs at U.S. medical schools.

Rowley BD, Baldwin DC Jr.

Office of Education Research, American Medical Association, Chicago, Illinois.

[187. J Med Educ. 1988 Oct;63\(10\):739-46.](#)

Substance abuse units taught by four specialties in medical schools and residency programs.

Davis AK, Cotter F, Czechowicz D.

Substance Abuse Faculty Development Program, Society of Teachers of Family Medicine, Kansas City, Missouri.

Four medical specialty organizations conducted a survey of 294 departments in 98 medical schools and 1,124 residency programs to identify the number and type of curriculum units on substance abuse offered by these specialties. A curriculum unit was defined as a formal block of teaching on substance abuse. A total of 251 (85 percent) of the medical school departments and 828 (74 percent) of the residency programs responded. Of those, 175 (70 percent) of the medical school departments and 479 (58 percent) of the residency programs reported offering at least one curriculum unit on substance abuse. There was considerable variation among the four specialties in the number and percentage of departments or programs reporting such units. Overall, a majority of the units addressed both alcohol and other drugs, were required, and included a clinical component. Evaluations of content and teaching strategies are needed to examine the quality and adequacy of substance abuse training.

[188. Alcohol Clin Exp Res. 1988 Jun;12\(3\):427-32.](#)

Carbohydrate-deficient transferrin, a marker for chronic alcohol consumption in different ethnic populations.

Behrens UJ, Worner TM, Braly LF, Schaffner F, Lieber CS.

Alcohol Research and Treatment Center, Veterans Administration Medical Center, Bronx, NY 10468.

Serum levels of carbohydrate-deficient transferrin (CDT) were determined in a racially mixed population of 107 alcoholics, 18 healthy, nonalcoholic control subjects, 62 abstinent alcoholics, and in 64 Caucasian patients with various nonalcoholic liver diseases. The upper limit of normal CDT levels was 80 mg/liter (2 SD above the mean). CDT values exceeding this level were found in more than 80% of Black, Puerto Rican, and Caucasian alcoholics who had consumed greater than or equal to 50 g of alcohol/day for 1 month or longer prior to testing. Puerto Rican alcoholics had higher CDT values than the Black and Caucasian ethnic groups; however, these differences were significant only when compared to the Black population. Of 64 patients with nonalcoholic liver diseases, one individual with chronic active hepatitis (CAH) with an alcohol consumption of 20 g/day, and 10 of 26 subjects with primary biliary cirrhoses (PBC), who claimed to consume either no or only occasional moderate amounts of alcohol, had CDT levels ranging from 81 to 144 mg/liter. Seven of these individuals were in advanced stages of PBC. Total transferrin levels were variable and not significantly different in all subject groups studied. CDT/total transferrin ratios were increased in most patients with abnormal amounts of CDT, and there was a significant correlation between these ratios and CDT levels in all study groups. Serum enzyme parameters as well as red blood cell mean corpuscular volumes did not correlate with CDT values.(ABSTRACT TRUNCATED AT 250 WORDS)

[189. Bol Asoc Med P R. 1987 Jan;79\(1\):12-20.](#)

[Alcohol and drug abuse in Puerto Rico: progress toward the national objectives of health for 1990 (X)].

[Article in Spanish]

Rigau-Pérez JG.

[190. Alcohol Clin Exp Res. 1985 Sep-Oct;9\(5\):443-6.](#)

Cultural influences and alcoholism: a study of Puerto Ricans.

Fernandez-Pol B, Bluestone H, Morales G, Mizruchi M.

Some reports in the literature suggest a correlation between acceptance of traditional Latin American family values and alcoholism in Hispanic males. To examine the effects of traditional values on alcoholism, the authors surveyed 151 lower-class Puerto Rican alcoholics (126 males and 25 females), using a scale to measure Hispanic-American family values. The scores of these patients were compared with those of 116 lower-class Puerto Rican nonalcoholics (45 males and 71 females). A path model was constructed with alcoholism as the dependent variable, the Traditional Scale scores as an intervening variable, and demographic variables which may also influence alcoholism (such as sex, age, years of residence in the United States, education, and English ability) as independent variables. Overall, the findings show that traditionalism is a significant predictor of alcoholism, both directly and as an intervening variable in the relation between sex and alcoholism, and education and alcoholism. However, sex and years of residence in the United States were both stronger direct predictors of alcoholism than was traditionalism. These results support the hypothesis that the manifestations of alcoholism in lower-class Puerto Ricans are influenced by cultural attitudes.

[191. Arch Intern Med. 1985 Aug;145\(8\):1413-7.](#)

Intravenous drug abusers and the acquired immunodeficiency syndrome (AIDS). Demographic, drug use, and needle-sharing patterns.

Friedland GH, Harris C, Butkus-Small C, Shine D, Moll B, Darrow W, Klein RS.

We studied the demographic characteristics, drug use patterns, and sexual habits of intravenous (IV) drug abusers to further define this population at risk for acquired immunodeficiency syndrome (AIDS). Sixteen IV drug abuser patients with AIDS, 24 IV drug abuser patients with AIDS-related complex (ARC), and 14 IV drug abuser controls without evidence of AIDS or ARC were evaluated. The subjects in each group were similar demographically, in drug use practice, and in sexual orientation and experience. Of the AIDS and ARC patients, 34 (88%) of 40, including all seven homosexual men, shared needles, as did all drug abusers without AIDS or ARC. Seventy-four percent of patients, including all homosexual men, attended "shooting galleries," where anonymous multiple-partner needle sharing took place. Needle sharing

supports the hypothesis of AIDS transmission by a blood-borne route, can explain the spread of AIDS and the high rate of seropositivity to the putative AIDS agent among IV drug abusers, and is a logical link between IV drug abusers and male homosexuals, the two largest groups with AIDS.

[192. Bol Asoc Med P R. 1985 Jul;77\(7\):278-85.](#)

[Human exposure to animal rabies in Puerto Rico, 1980-1983].

[Article in Spanish]

Rigau-Pérez JG, Marqués-Díaz BJ, Benítez-Avila ME, Burton AH.

[193. MMWR Morb Mortal Wkly Rep. 1984 Nov 30;33\(47\):669-72.](#)

Streptococcal foodborne outbreaks--Puerto Rico, Missouri.

Centers for Disease Control (CDC).

[194. Med Anthropol. 1984 Fall;8\(4\):246-73.](#)

Indigenous treatment for alcoholism: the case of Puerto Rican spiritism.

Singer M, Borrero MG.

[195. J Psychoactive Drugs. 1983 Oct-Dec;15\(4\):281-92.](#)

Dealing, demoralization and addiction: heroin in the Chicago Puerto Rican community.

Glick R.

[196. Am J Med. 1983 Mar;74\(3\):433-41.](#)

Community-acquired opportunistic infections and defective cellular immunity in heterosexual drug abusers and homosexual men.

Small CB, Klein RS, Friedland GH, Moll B, Emeson EE, Spigland I.

Fourteen previously healthy young patients with unusual community-acquired opportunistic infections were seen over a period of three years. They differ from patients previously described in that 11 were heterosexual drug abusers (including two women) and only three were homosexual men. There were eight Puerto Ricans, five blacks, and one white. Infections included *Pneumocystis carinii* pneumonia (seven), disseminated *Mycobacterium intracellulare* infection, histoplasmosis, cryptococcosis, and cytomegalovirus infection (one each), oral thrush (13), and *Candida* esophagitis (two). All patients had impaired cellular immunity manifested by cutaneous anergy and lymphopenia, and all 11 tested had a markedly decreased ratio of T helper/inducer cells to T suppressor/cytotoxic cells. Twelve had evidence of associated viral infection (Epstein-Barr virus in nine, cytomegalovirus in five, Herpes simplex type 2 in two). Clinical presentation was with a severe opportunistic infection or with a prodrome consisting of oral thrush and nonspecific findings including malaise, fever, lymphadenopathy, or cough. The syndrome of immunodeficiency and opportunistic infection occurs in nonwhite heterosexual drug abusers, not exclusively in white homosexual men, and patients may present for medical care before the onset of a severe opportunistic infection.

[197. Bol Col Prof Enferm P R. 1982 Sep;8\(31\):18-22.](#)

[Magnitude and impact of the use and abuse of drugs in Puerto Rico].

[Article in Spanish]

Zayas Puig S.

[198. J Infect Dis. 1982 May;145\(5\):783-5.](#)

Botulism from acidic food: first cases of botulinic paralysis in Puerto Rico.

Rigau-Pérez JG, Hatheway CL, Valentín V.

[199. Bol Asoc Med P R. 1982 Feb;74\(2\):32-4.](#)

First cases of botulinic paralysis in Puerto Rico.

Rigau-Pérez JG, Hatheway CL, Valentín V.

[200. Int J Addict. 1981 Jul;16\(5\):841-7.](#)

Rehabilitation of the Puerto Rican addict: a cultural perspective.

Langrod J, Alksne L, Lowinson J, Ruiz P.

Drug addiction has assumed major proportions in the Hispanic population. This paper questions whether treatment programs in Puerto Rican communities adequately relate their rehabilitative services to the realities of Hispanic culture. The experience of a clinic in the South Bronx is reviewed, and it is suggested that programs need to be aware of cultural differences, provide Hispanic staff to treat Hispanic patients, and build up acknowledged strengths, values, and folkways.

[201. J Stud Alcohol Suppl. 1981 Jan;9:217-40.](#)

The cultural context of drinking and indigenous therapy for alcohol problems in three migrant Hispanic cultures. An ethnographic report.

Gordon AJ.

[202. Int J Addict. 1980 Jul;15\(5\):631-45.](#)

A study of professed reasons for beginning and continuing heroin use.

Fulmer RH, Lapidus LB.

Eighty male ex-heroin addicts were given a standardized interview to investigate Their reasons for beginning and continuing heroin use. The relative popularity of motives is presented. Changes in popularity of motives at different stages of addiction were found, and a view of the motivational development of addiction is discussed. An oblique rotation factor analysis was used to investigate relationships between motives. Seven factors were identified for "beginning" motives, and correlations between the factors suggested two contrasting motivational syndromes. Motives for continuing heroin use also yielded seven factors, but with a different hierarchy of importance. "Continuing" factors were generally more complex and more frequently correlated with each other than "beginning" factors suggesting that continuing heroin use is a more multidetermined phenomenon than beginning it, and one in which it is more difficult to identify discrete motivational syndromes. Implications for future research and treatment are suggested.

[203. Am J Drug Alcohol Abuse. 1980;7\(1\):63-72.](#)

Consultation to a Puerto Rican drug abuse program.

Delgado M.

The increasing number of Hispanics residing within the United States requires the development of human service programs which are culturally and linguistically relevant to this population. The area of drug abuse is no exception to this need. However, the limited amount of resources targeted to serve drug-addicted Hispanics has required the development of innovative strategies to maximize existing resources. The development of collaborative programs for reaching Hispanic addicts and their families is one means of impacting on the needs of this group. This article delineates a collaborative effort between a Puerto Rican drug abuse program and a Hispanic component of a youth guidance center in Worcester, Massachusetts. This effort involved a series of joint undertakings focused on needs assessment, consultation, program development, and in-service training. In addition, a series of recommendations is made to assist other programs in developing comparable interagency projects.

[204. Int J Addict. 1979 Feb;14\(2\):243-58.](#)

Drug use among public and private secondary school students in Puerto Rico.

Robles R, Martínez R, Moscoso M.

This paper reports results of the first wave of a two-wave panel survey carried out on a representative sample of Puerto Rican public and private secondary school students in the 1974--1975 academic year. Twelve percent of the students reported the use of one or more illicit drugs. The illicit drug most frequently used was marijuana. A greater proportion of adolescents have used alcohol and tobacco than any of the illegal drugs. Private school students of both sexes reported more use of illicit and licit drugs than their public school peers, suggesting that socio-economic factors may be influencing Puerto Rican adolescent drug behavior. Differences between Puerto Rican adolescents vary significantly depending on sex and suggest that Puerto Rican sociocultural conditions may have an important effect upon male-

female drug use patterns. One of the most significant findings of the study is the high frequency of drug use among Puerto Rican adolescents who ever lived in other countries.

[205. Am J Drug Alcohol Abuse. 1979;6\(3\):337-44.](#)

Cultural implications in treating the Puerto Rican female.

Obeso P, Bordatto O.

This paper presents an overview of Puerto Rican history, its traditional effect on Puerto Rican women, and its applicability in treating the Puerto Rican female drug user. The paper focuses on items of historical and cultural significance and includes data gathered from selected interviews of Puerto Rican females in treatment. What has been compiled here is a description of characteristics, traits, and attributes that distinguish Puerto Ricans from other ethnic groups and those traits traditionally attributed to their women. It takes into consideration such things as the role of the family, religious implications, "machismo" behavior exhibited by males upon females, attitudinal differences between mainland and island females, and changes undergone during migration. There currently exists a paucity of literature concerning the treatment of Puerto Ricans in general and even less exists with regard to Puerto Rican women. This paper, therefore, purports only to present preliminary findings in this area. Its intent is to serve as an initial research effort, to encourage further areas of study, and to contribute valuable information for those who currently treat ethnic populations.

[206. Am J Drug Alcohol Abuse. 1979;6\(2\):173-88.](#)

Parental correlates of drug use among young Puerto Rican adults.

Nuttall EV, Nuttall RL.

A study was conducted by interview with 635 young Puerto Rican adults in Puerto Rico. Half of the sample were selected as high risk of heroin involvement, half as low risk. Parent-child relationships and parental usage of alcohol and cigarettes were related to five indices of heroin involvement. For boys, maternal acceptance was negatively associated with having ever tried heroin. Higher levels of maternal control were associated with lesser heroin use, never having tried heroin, less knowledge of heroin-related vocabulary, and fewer friends who had used heroin. Being the mother's favorite child was associated with less approval of heroin use. For boys, paternal acceptance was related to less knowledge of heroin vocabulary. Higher levels of paternal control went with less heroin use, less knowledge of heroin vocabulary, never having tried heroin, and few friends who used heroin. Paternal discipline was related to fewer friends using heroin. For girls, maternal control was associated with less knowledge of heroin vocabulary, maternal discipline with fewer friends using heroin, and being the mother's favorite child went with low heroin use, low approval for heroin use, and few friends using heroin. For girls, paternal acceptance and paternal discipline were associated with fewer friends using heroin. Maternal smoking and drinking were associated with increased usage of heroin for her son.

[207. NIDA Res Monogr. 1977 Nov;16:147-76.](#)

Reflections on the epidemiology of heroin and narcotic addiction from the perspective of treatment data.

Sells SB.

[208. Bol Asoc Med P R. 1977 Apr;69\(4\):113-9.](#)

[Socioepidemiological factors of drug use among students of secondary schools of Puerto Rico].

[Article in Spanish]

Robles R, Martínez R, Colón AI, Moscoso M.

[209. NIDA Res Monogr. 1977 Mar;\(10\):78-83.](#)

The epidemiology of drug abuse: current issues. Non-survey techniques--sub-cultural groups.

Fitzpatrick JP.

[210. Bol Asoc Med P R. 1977 Mar;69\(3\):77-82.](#)

Heroin overdose on the rise again? (toxicology of morphine).

Kaye S, De Lewis AT.

[211. Bol Col Prof Enferm P R. 1976 Dec;2\(8\):27.](#)

[Outbreak of staphylococcal infection in an airplane].

[Article in Spanish]

[No authors listed]

[212. Bol Asoc Med P R. 1976 Mar;68\(3\):47-52.](#)

Poisoning in children.

Kaye S.

[213. Am J Drug Alcohol Abuse. 1976;3\(1\):185-90.](#)

Proceedings: Minorities and alcohol/drug abuse.

Martinez J.

[214. Bol Asoc Med P R. 1975 Dec;67\(12\):369-71.](#)

Sudden drop in alcohol and drug related traffic deaths in Puerto Rico - 1974.

Kaye S.

[215. Am J Gastroenterol. 1975 Jul;64\(1\):49-54.](#)

Abnormal liver function and elevated hemoglobins in heroin addicts.

Gilbert HS, Stimmel B.

Reports dealing with medical problems of heroin dependency contain conflicting data regarding hemoglobin concentration. Medical evaluation of a large group of asymptomatic heroin users undergoing screening for participation in a methadone maintenance treatment program revealed a significant number of patients with elevated hemoglobin levels. The presence of increased hemoglobin concentrations in the addict population was highly correlated with the presence of abnormalities in liver function. In a preliminary serial study, a diminution of elevated hemoglobin values toward normal was observed in heroin users undergoing methadone maintenance therapy. These findings suggest the presence of deranged mechanisms responsible for the regulation of plasma volume and/or erythropoiesis which may have pathophysiologic consequences of importance in the medical management of the heroin addict.

[216. Am J Public Health. 1975 Jun;65\(6\):604-12.](#)

Parental failure and consequences for children. The drug-abusing mother whose children are in foster care.

Fanshel D.

The developmental progress of children of drug-abusing mothers was assessed in a study of foster children. Cognitive abilities and personal adjustment appeared to be normal but significantly poorer school adjustment patterns were observed. Such children are disproportionately locked into foster care.

[217. Br J Addict Alcohol Other Drugs. 1975 Mar;70\(1\):83-8.](#)

Study of methadone terminations.

Brown EM, Benante J, Greenberg M, MacArthur M.

[218. Bol Asoc Med P R. 1974 Nov;66\(11\):242-3.](#)

[Alcohol and alcoholism].

[Article in Spanish]

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[219. Br J Addict Alcohol Other Drugs. 1974 Sep;69\(3\):243-8.](#)

Involvement in a drug subculture and abstinence following treatment among Puerto Rican narcotic addicts.

Snarr RW, Ball JC.

[220. QJ Stud Alcohol. 1974 Mar;35\(1 pt A\):221-31.](#)

Alcoholism and violent death.

Haberman PW, Baden MM.

[221. Am J Drug Alcohol Abuse. 1974;1\(1\):53-66.](#)

Narcotic addiction in New York City: trends from 1968 to mid-1973.

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Patterns and causes of drug addiction among Puerto Rican females.

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[223. Int J Addict. 1974;9\(2\):301-14.](#)

Patterns of multiple drug abuse: 1969-1971.

Simpson DD, Sells SB.

[224. Bol Asoc Med P R. 1973 Jun;65\(6\):135-9.](#)

Influence of alcohol on traffic deaths in Puerto Rico 1972.

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[225. Health Serv Rep. 1973 May;88\(5\):416-8.](#)

Low birth weight of infants associated with maternal heroin use: New York City, 1966-67 and 1970-71.

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[226. Proc Natl Conf Methadone Treat. 1973;2:1213-8.](#)

Age of drug use and the transition from school to work.

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[227. Proc Natl Conf Methadone Treat. 1973;1:324-9.](#)

Deaths of narcotic addicts in New York City in 1971: those reported to be using methadone.

Nadler J, Fumia F, Cherubin C.

[228. Int J Addict. 1973;8\(5\):847-51.](#)

The use of doriden by young male heroin addicts.

Lusins J, Klempner WL, Rooney WC.

[229. Int J Addict. 1973;8\(5\):767-77.](#)

A psychobehavioral residential drug abuse program: a new adventure in adolescent psychiatry.

Coghlan AJ, Gold SR, Dohrenwend EF, Zimmerman RS.

[230. JAMA. 1972 Dec 4;222\(10\):1279-80.](#)

Private methadone maintenance. Analysis of a program after one year.

Zaks A, Feldman M.

[231. Bol Oficina Sanit Panam. 1972 Oct;78\(4\):334-45.](#)

[The pedestrian and the drunk driver in Puerto Rico (1970)].

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[232. Pediatrics. 1972 Apr;49\(4\):604-6.](#)

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Osband ME, Tobin JR.

[233. Am J Med. 1972 Mar;52\(3\):283-8.](#)

Lead poisoning.

Guinee VF.

[234. Int J Addict. 1972 Summer;7\(2\):237-45.](#)

Factors related to cure of opiate addiction among Puerto Rican addicts.

Zahn MA, Ball JC.

[235. Int J Addict. 1972 Summer;7\(2\):191-9.](#)

Differential patterns of drug abuse among white activists and nonwhite militant college students.

Bailey WC, Koval M.

[236. Am J Med. 1971 Dec;51\(6\):704-14.](#)

A clinical study of an epidemic of heroin intoxication and heroin-induced pulmonary edema.

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[237. Bol Asoc Med P R. 1971 Nov;63\(11\):302-6.](#)

Alcohol and its effects on man.

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[238. Bol Asoc Med P R. 1971 Jul;63\(7\):170-7.](#)

The drunk pedestrian and driver on our highways in Puerto Rico (1970).

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[239. Int J Addict. 1971 Jun;6\(2\):225-39.](#)

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General guide to the diagnosis and treatment of poisonings.

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Patterns of poisoning in Puerto Rico.

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[243. Bol Asoc Med P R. 1969 Feb;61\(2\):78-9.](#)

[Prevention of accidental poisoning].

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[244. Am J Nurs. 1967 Nov;67\(11\):2348-53.](#)

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Parent-child cultural disparity and drug addiction.

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