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Latina Mother–Daughter Dyads: Relations Between Attachment and Sexual Behavior Under the Influence of Alcohol or Drugs

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Abstract

Associations among mother-daughter attachment, mother and daughter substance abuse, and daughter's sexual behavior under the influence of drugs and alcohol were investigated among 158 adult U.S. Latina daughters. Latina daughters were sampled from four mother-daughter dyad types: substance abusing mother and daughter, substance abusing mother only, substance abusing daughter only, and nonsubstance-abusing mother and daughter. Substance abusing daughters with substance abusing mothers, and daughters who were less strongly attached to their mothers, reported more sex under the influence of drugs. Age, marital status, substance abuse, and mother's substance abuse all influenced the daughter's sex under the influence of alcohol. An unexpected positive association between attachment and sex under the influence of alcohol was found for daughters who were more closely attached to a substance abusing mother. Implications for future research, and HIV/AIDS and drug prevention and treatment programs for Latinas are discussed.

Keywords

Mother-daughter attachment; Alcohol and drug intoxication; Substance abuse; HIV risk behaviors; Latinas

Introduction

During the past decade, there has been an increasing interest in documenting the effects of substance use on sexual risk behaviors in Latinas (Castañeda & Gómez Bastidas, 2005; Kaplan, Erickson, & Juárez-Reyes, 2002; Matos et al., 2004; Paxton, Myers, Hall, & Javanbakht, 2004). This interest is likely due to the disproportionate rate of HIV infection affecting Latinas in the United States (Centers for Disease Control and Prevention, 2007). HIV/AIDS rates are increasing for women in general, as well as for individuals of Latin American descent. In 1992, women constituted 14% of adults and adolescents diagnosed with HIV/AIDS; however, by 2003 this increased to 22% (CDC, 2004), and increased again to 27% in 2005 (CDC, 2007). Latinas have an especially high risk for infection with HIV. In 2005, the HIV/AIDS contraction rate for Latina women was five times the rate for non-Latina White women (CDC, 2007).

Extant research has found that use of alcohol and other drugs places Latina and non-Latina teens and young adults at risk for unsafe sexual practices (Youth Risk Behavior Surveillance Survey [YRBSS] 2008). In 2007, 17% of sexually active adolescent Latinas reported being under the influence of alcohol or drugs during their most recent sexual experience (YRBSS, 2008). White females report the highest prevalence of sex under the influence of drugs or alcohol (19.8%), and black females report the least (12.9%). Studies have found that young adult Latinas who frequently use alcohol (Castañeda & Gómez Bastidas, 2005; Matos et al., 2004) or illicit drugs (Kaplan et al., 2002; Paxton et al., 2004) were more likely to engage in unprotected sex than those who used alcohol less frequently or not at all. However, because most of the research in this area has been conducted with adolescents and young adults, it is unclear whether the association between substance use and sexual risk taking persists into adulthood.

An important issue that has not received much attention in the literature on Latina sexual risk behavior is engaging in sexual behavior while under the influence of alcohol or drugs. Although preliminary studies linking drug and alcohol use to unsafe sex suggest that substance-using Latinas are more likely to engage in unsafe sexual practices, these analyses often do not focus specifically on sexual behaviors while the woman is intoxicated. Such behaviors are especially risky due to the effects of drugs and alcohol on cognition and judgment in substance users (Logan, Cole, & Leukefeld, 2002; Volkow, 2006). Specifically, intoxication increases the likelihood of impulsive and risky decisions and decreases inhibition (Bellis et al., 2008; George et al., 2008; Stoner, George, Peters, & Norris, 2007), which may, in turn, increase the likelihood of unsafe sex.

A second important issue concerns parental influences on Latinas' sexual risk behaviors into adulthood. Parental influences can be subdivided into at least two categories: relationships with the parents and the parents' own substance use. In samples of U.S. Latina/os, studies have identified parental substance use as a risk for substance use in offspring (Barrett & Turner, 2006) and have suggested that closeness to parents serves to protect Latina/o adults against substance use and HIV risk behavior (Wang, Matthew, Chiu, Fan, & Bellamy, 2007). However, as previously noted, the vast majority of studies on familial influences on Latina substance use and HIV risk behavior have focused on adolescents. To our knowledge, no extant research has examined familial factors, particularly attachment to mother, as risks and protective mechanisms vis-à-vis Latina adults' engaging in unsafe sexual behavior while under the influence of alcohol or drugs. More research is needed on adult Latinas because of the cultural value placed on strong family relationships well into adulthood (i.e., familism; De La Rosa & White, 2001; Muñoz-Laboy, 2008; Santisteban, Muir-Malcolm, Mitrani, & Szapocznik, 2002). Given these research needs, the present study was designed to examine substance abuse and familial risks for engaging in sexual risk behaviors while under the influence of alcohol or drugs in a community sample of adult Latinas.

The mother traditionally plays a key role in the Latino family (Gomez & Marin, 1996). Latina women—and especially mothers—have traditionally been viewed as owing the family a duty of self-sacrifice (Galanti, 2003). This duty has been termed *marianismo*. Marianismo is the female counterpart to *machismo*, which refers to the exaggerated masculine gender roles to which Latino men are expected to adhere within the family (Galanti, 2003). To be considered the *buena ama de casa* (good housewife and mother), women are encouraged to be selfless in their dedication to the family. This tradition of sacrifice and its accompanying servitude often extends to daughters in accordance with traditional cultural values. Daughters are often socialized to treat their mothers with high levels of respect so they can be considered a *buena hija* (good daughter). This often includes complying with the mother's wishes and not shaming the family by engaging in deviant behaviors (e.g., substance abuse, premarital sex). As a result of traditional cultural values, Latina mothers and daughters often forge deep lifelong bonds, in which they rely heavily on one another for emotional, financial, and other support over the lifespan (Delgado, 1998; Garcia-Preto, 1998; Vega, 1990; Villanueva Dixon, Graber, & Brooks-Gunn, 2008). Although *marianismo* is often questioned by some younger Latinas born in the U.S., it generally remains an important component of Latino cultural expectations. Thus, traditional Latino cultural values are theorized to foster mother–daughter relationships characterized by high levels of attachment, abstention from substance, daughters' premarital chastity, and avoidance of health risk behaviors like sex under the influence of alcohol or drugs. In particular, the daughter's attachment to her mother is hypothesized to protect against health risk behaviors.

In addition to considering the culturally based, family dynamics affecting Latina mothers and daughters, the present study was guided by Bogenschneider's (1996) ecological risk/protective model. This model is based on Bronfenbrenner's (1986) ecological theory of human development and on Lerner's (1995) theory of developmental contextualism. Similar to the concept of familism, these theoretical perspectives also suggest that the family represents the primary context for human development over the lifespan (Steinberg, 2001; Szapocznik & Coatsworth, 1999). Parents and other family members have the longest history with the individual. They play major roles in shaping patterns of development. These influences extend well beyond childhood and adolescence, such that family influences continue to be important in adulthood (Fergusson, Boden, & Horwood, 2007; Overbeek, Stattin, Vermulst, Ha, & Engels, 2007). Adult children and their parents—especially mothers and daughters—have been shown to influence one another's behavior considerably throughout the lifespan (Fingerman, 1995; Fingerman, Chen, Hay, Cichy, & Lefkowitz, 2006). As previously noted, the familism often endorsed by Latino families, along with the *marianismo* (and accompanying family ties) attached to the female gender role in many of these families, may render the adult daughter–mother relationship even more important (Galanti, 2003).

Ecological theories of human development also have been increasingly attentive to cultural concerns (e.g., Thurston & Vissandjée, 2005). Specifically, within the context of immigration, family relationships may be transformed as individual family members adapt to a new cultural context. Family relationships may operate differently depending on how long family members have been in the U.S. (Szapocznik & Kurtines, 1993). Therefore, nativity and length of time in the U.S. are considered salient contextual factors in the lives of the women in the present study and are included in the analytic plan.

The Present Study

The purpose of this article was to report the findings from a study investigating the roles of mother–daughter attachment, and maternal and daughter substance use, in adult daughters' engagement in sexual behavior under the influence of substances, while statistically controlling for the daughters' nativity and length of time in the U.S. To most effectively examine the

interplay between maternal and daughter substance abuse on the daughter's engagement of sex under the influence of alcohol or drugs, we recruited four types of mother–daughter dyads: mother–daughter both drug or alcohol abusers (Dyad 1); mother-abuser and daughter non-abuser (Dyad 2); mother-non-abuser and daughter-abuser (Dyad 3); and mother–daughter both non-abusers (Dyad 4).

The study was designed to address four hypotheses: First, as a manipulation check, daughters who were not drug abusers (and whose mothers were not drug abusers—those daughters categorized into Dyad 4) were hypothesized to report the least sex under the influence of alcohol or drugs. Hypothesis 1 also allows us to explore for differences between two types of nonsubstance abusing daughters—those with a substance abusing mother (Dyad 2) and those without a substance abusing mother (Dyad 4). Second, we anticipated that daughter reports of attachment to mother would be inversely associated with sex under the influence of alcohol or drugs regardless of dyad type. Third, we hypothesized that being born in the U.S., and having resided in the U.S. for longer periods of time among immigrant daughters, would be positively associated with the daughter's risk for sex under the influence of alcohol or drugs regardless of dyad type. Finally, given that younger, unmarried women are at higher risk for substance use (Delva et al., 2005), it was expected that unmarried and younger daughters would be more likely to engage in sex under the influence of alcohol or drugs regardless of dyad type.

Method

Participants

Participants were 158 self-identified Latina mother–daughter dyads (total $N = 316$) across four drug use categories: Dyad 1 = drug-abusing mothers and daughters ($n = 80$); Dyad 2 = drug-abusing mothers and non-abusing daughters ($n = 38$); Dyad 3 = non-abusing mothers and drug-abusing daughters ($n = 102$); and Dyad 4 = non-abusing mothers and daughters ($n = 96$).

Approximately 46% of daughters ($n = 72$) were born in the United States. About 15% of daughters ($n = 24$) were born in Cuba. The next largest subgroup was 9.5% of daughters ($n = 15$), who were born in Colombia. The remainder of daughters reported the following birth countries: Peru ($n = 8$, 5.1%), Nicaragua ($n = 6$, 3.8%), Honduras ($n = 6$, 3.8%), Venezuela ($n = 6$, 3.8%), Dominican Republic ($n = 5$, 3.2%), Puerto Rico ($n = 4$, 2.5%), and Mexico ($n = 4$, 2.5%). One daughter (0.6%) reported being born from each of the following countries: Argentina, Bolivia, Brazil, and Chile. Table 1 summarizes the daughters' other demographic variables (age; receipt of financial, emotional, or legal assistance with immigration; family-of-origin socioeconomic status; personal income; educational level; employment status; marital status; and length of time in U.S.) across dyad type.

Procedure

Data for the present analyses were taken from a study of intergenerational transmission of drug abuse between Latina mothers and daughters in Miami-Dade County, Florida. The study was approved by, and conducted in compliance with, the Institutional Review Board at Florida International University. The general criteria for inclusion of mothers and daughters in the parent study were: consenting to be interviewed for at least 2–3 h; 18 years old or older; self-identifying as Latina; living in Miami-Dade County, Florida; and willing to provide two telephone numbers to researchers for correspondence during participation in the study.

Mothers and daughters were classified into the four dyads based on whether they qualified as abusers of alcohol, marijuana, cocaine, heroin, ecstasy, and/or prescription drugs. For the purpose of the current study, alcohol abusers were defined in terms of at least one binge drinking episode per month (adapted from Naimi et al., 2003)—at least 4–5 glasses of wine, 3–4 cans/

bottles of beer, or 3–4 four-ounce drinks of hard liquor per occasion-during the 12 months prior to assessment. Illicit drug abusers were defined as participants who reported at least 3 days per week of marijuana use, 2 days per week of cocaine use, one or more occasions of heroin use per week, and/or least 3 ecstasy use occasions per month during the 12 months prior to assessment. Abuse of prescribed medication was measured by asking participants whether they had taken medicine without a doctor's authorization, in larger amounts than prescribed, or for longer periods than prescribed, in the 12 months prior to assessment (adapted from Turner et al., 2001).

All study participants were recruited for a one time face-to-face interview by using a snowball sampling (chain referral) method (McCracken et al., 1997). Given the fairly low representation of drug and alcohol abusers in the general population, different strategies were used to recruit substance abusing and non-abusing participants. Non-abusing Latinas were recruited to participate in the study through community health fairs, health clinics, radio announcements on local Spanish-language stations, and advertisements on local television channels. Substance abusing participants were recruited through substance abuse support groups such as Narcotics Anonymous (NA) and Alcoholics Anonymous (AA) meetings and by advertising in a local alternative newspaper, on an FM radio station, and through announcements posted at local drug court programs.

Interviews were conducted in either Spanish or English by trained interviewers using a structured questionnaire. This questionnaire consisted primarily of existing and widely used measures. All measures were pilot-tested to ensure that they were culturally and linguistically sensitive to Latino culture and to women. Many of these measures were already available in both English and Spanish and had previously been used with Latinas. Measures not available in Spanish were back-translated into Spanish in accordance with guidelines established by the Institutional Review Board and Office of Sponsored Research Administration at Florida International University. The questionnaire took 2–3 h to complete, and took place at locations convenient to participants.

Measures

Demographics Variables—A demographic form asked participants to report their age, nativity, the receipt of financial, emotion, or legal assistance with immigration, family of origin socioeconomic status, annual personal income, educational level, employment status, marital status, and length of time in U.S. Length of time in U.S. was defined as percent of the participant's life that had been spent in the U.S. This percentage was calculated by dividing the number of years a participant reported living in the U.S. by her age. Because Latino families often may move back and forth between the United States and their countries of origin (Congress, 2004), even U.S.-born daughters may have spent some time living outside of the United States.

HIV and Other Sexually Transmitted Infections (STI)—Each participant was asked if she ever had been informed by a doctor or other health professional that she had gonorrhea, syphilis, herpes, chlamydia, genital warts, Hepatitis C, HIV/AIDS, vaginitis, or pelvic inflammatory disease. These questions were adapted from a survey designed for a study of substance use and sexual risk behavior trajectories of young adults (Life Course and Health Research Center, 1997). Participant responses to the STI items were summed to compute a total number of STI score. Mean total number of STI scores are reported by dyad type in Table 1.

Unprotected Sex—Each participant was asked the number of times she had engaged in oral, anal, and vaginal sex during the 12 months prior to assessment. Participants were subsequently

asked, “How many of those times did you or your partner use a condom during oral, anal, and vaginal sex?” These items also were derived from the survey designed for a study of substance use and sexual risk behavior trajectories of young adults (Life Course and Health Research Center, 1997). From these responses, a condom use to sexual behavior ratio was calculated for each participant. Mean participant condom use ratios by sexual behavior and dyad type are reported in Table 1.

Attachment—A 25-item version of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) was used to assess attachment between mothers and daughters. Data from daughters rating their attachment relationships with their mothers were used in the present analyses. Daughters were asked to indicate their agreement with each item using a 5-point Likert scale ranging from *Almost never or never true* to *Almost always or always true*. In prior research, internal consistency and test–retest reliability coefficients for the IPPA have been acceptable (Adam & Chase-Lansdale, 2002). However, because the IPPA was originally developed with adolescent and young adult samples, we conducted a confirmatory factor analysis to ensure that the previously reported IPPA subscales/factors (i.e., communication, trust, and alienation) were appropriate for the present sample of adult Latina daughters. The confirmatory factor analysis of the three factor model produced an inadequate fit to the data (see Kline, 2005, for a review of fit statistics and acceptable values). The chisquare value (272 *df*) was 578.67 ($p < .0001$), the comparative fit index (CFI) value was .85, and the root mean square error of approximation (RMSEA) value was .08. One of the original subscales (alienation) yielded inadequate evidence of internal consistency in the current sample [e.g., Cronbach’s alpha coefficient = .68, indicating the standard error of measurement will be over half (0.57) a standard deviation and suggesting a large amount of error or inconsistency in the measure; Nunnally & Bernstein, 1994]. It was, therefore, possible that the scoring algorithm for the measure was not appropriate for this population. As a result, we analyzed a factor solution where all of the items patterned onto a single factor. This solution provided an adequate fit to the data, $\chi^2(261) = 443.44$, $p < .0001$; CFI = .91; RMSEA = .07. Therefore, a total attachment scale score was used in the current study. We calculated a total attachment scale score by first reverse scoring the alienation scale items and summing these reverse-scored items with the items from the other subscales (communication and trust). The Cronbach’s alpha coefficient for the total scale score was .93 for the daughter sample in the current study.

Alcohol Use—The alcohol consumption items from the Health and Daily Living Form (Billings, Cronkite, & Moos, 1983) were used to assess participant alcohol use frequency during the 12 months prior to assessment and, in part, to determine dyad membership (based on use rates during the 12 months prior to assessment). The questions used in the current study assessed how frequently participants consumed alcohol (i.e., alcohol frequency) in the 3 and 12 months prior to assessment, using an 8-point Likert scale ranging from 1 (never uses) to 8 (uses every day).

Drug Use—The Drug Use Frequency measure (DUF; O’Farrell, Fals-Stewart, & Murphy, 2003) was used to assess the frequency of drug use among the participants during the 12 months prior to assessment and, in part, to determine dyad membership (based on use rates during the 12 months prior to assessment). The DUF also was used to assess illicit drug use and non-medical use of prescription drugs (e.g., sedatives) in the 3 and 12 months prior to assessment. The DUF measure assesses frequency of use for each separate illicit and prescription drug (sedatives, hypnotics or tranquilizers; cannabis; stimulants; heroin; opioids; cocaine; PCP; hallucinogens; inhalants; others) using an 8-point Likert scale ranging from 1 (never uses) to 8 (uses every day). Past research (O’Farrell et al., 2003) indicates that DUF scores correlate closely ($r = .87$) with collateral reports of drug use frequency and with self-reports on other drug and alcohol use measures (r values ranged from .83 to .98).

Sex Under the Influence of Substances—Sexual behavior under the influence of substances was measured using six items taken from a survey designed for a study of substance use and sexual risk behavior trajectories of young adults (Life Course and Health Research Center, 1997). Participants' responses to the six selected items were used to create a sex under the influence of substance risk index (SUISRI). The six items assessed the frequency and effects of substance use by both the participant and her sexual partner(s) during the past 12 months. The first item assessed how often the respondent (or her partner) drank alcohol before or during sex during the past 12 months. The next item asked how often the respondent (or her partner) used drugs before or during sex during the past 12 months. For these two items, participants were asked to indicate their frequency on the following scale for each item: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, 5 = Always. The third item assessed, on average, how strongly the participant was affected (i.e., intoxicated) by alcohol use prior to or during sex. The fourth item asked how strongly the participant's sexual partner was affected (i.e., intoxicated) by alcohol use prior to or during sex. Similarly, the fifth item assessed on average, how strongly the participant was affected (i.e., intoxicated) by drug use prior to or during sex, and the sixth item asked how strongly the participant's sexual partner was affected (i.e., intoxicated) by drug use prior to sex. For these last two items, participants were asked to indicate their response on a scale of 1 = not at all, 2 = somewhat, or 3 = very strongly. The sex under the influence of alcohol risk index (SUIARI) score was calculated by summing the three items referring to alcohol. The sex under the influence of drugs risk index (SUIDRI) score was calculated by summing the three items referring to drugs.

Data Analysis Plan

The preliminary data analyses included calculating frequency distributions for continuous variables to determine whether they violated the assumption of normality. To explore for potential confounding variables, analyses of variance (ANOVA) and chi-square tests were performed to investigate for differences in demographic variables across the four dyads. We also explored total number of sexually transmitted infections, as well as condom use rates across dyads. For variables where the omnibus ANOVA was significant, pair-wise comparisons were conducted to identify significant differences between and among dyads.

To test our primary hypotheses, we conducted three hierarchical regression analyses. First, a bivariate correlation matrix was created for all variables involved in the hierarchical regression analyses to assess for potential multicollinearity. Next, we examined the hypothesized predictors of sex under the influence of any substance (alcohol or drugs). We then estimated two planned post hoc decomposition models—one with sex under the influence of drugs (including both illicit and prescription drugs) as the dependent variable, and another with sex under the influence of alcohol as the dependent variable. Predictors were entered sequentially into each equation in four blocks. Daughter's age and marital status were entered first, followed by nativity and time lived in the United States, followed by dyad type, and finally by attachment to mother. Entering age and marital status in the first block allowed us to control for their effects when examining the contributions of the predictor variables. Dyad type was entered in the third block using dummy coded variables for Dyads 1–3, with Dyad 4 as the reference group.

Results

Frequency distributions for continuous variables were examined to determine whether they violated the assumption of normality. All study variables appeared to be reasonably normally distributed with the exception of condom use during oral sex. Too few participants reported using condoms during oral sex, causing the variable to be too positively skewed for analyses. No significant differences were found among dyads for total number of sexually transmitted infections, or condom use ratios for anal or vaginal sex.

Demographic Differences Across Dyads

Significant dyad differences were found in age, percentage of life spent in the U.S., and nativity of daughters (described below). No significant differences were found among dyads for daughter's assistance with immigration, socioeconomic status of family of origin, current personal income, education level, employment status, and marital status.

Daughter Age, Nativity, and Years in U.S. by Dyad Type

As reported in Table 1, daughters from the "Mother, Daughter, Substance Abusers" dyad (Dyad 1) were significantly younger than daughters from the "Mother Non-Abuser, Daughter Abuser" dyad (Dyad 3) and from the "Mother, Daughter, Non-Abusers" dyad (Dyad 4). Daughters from the "Mother Abuser, Daughter Non-Abuser" dyad (Dyad 2) also were significantly younger than daughters from the "Mother, Daughter, Non-Abusers" dyad (Dyad 4). Results also showed that the percentage of U.S.-born versus immigrant daughters also differed by dyad (see Table 1). Daughters in substance-abusing-daughter dyads were more likely to be U.S.-born, compared to other dyads. Finally, daughters from the "Mother, Daughter, Non-Abusers" dyad (Dyad 4) reported significantly less time in the U.S. than all other dyad types.

Hierarchical Regression Analyses

A bivariate correlation matrix, including variables involved in regression analyses, is shown in Table 2. Thirteen participants were dropped from the regression analysis because they reported no sexual activity in the 12 months prior to assessment. The remaining 145 participants were used in subsequent analyses. Approximately 61% of the sample reported sex under the influence of alcohol, and 27.6% reported sex under the influence of drugs. Table 3 provides descriptive data for attachment, alcohol use frequency, drug use frequency, and sex under the influence of drugs and alcohol by dyad type. Results of the regression analyses are shown in Table 4, Table 5 and Table 6, and are described below.

Sex Under the Influence of Any Substance—Results indicated that the overall set of predictors was related to sex under the influence of substances, accounting for 27% of variability, $F(8, 144) = 6.35, p < .001$. Of the 8 hypothesized predictors of sex under the influence of drugs or alcohol, 2 were statistically significant. These effects included Dyad 1 (drug-abusing mothers and daughters) versus Dyad 4 (non-abusing mothers and daughters) membership ($\beta = .50, p < .001$), and Dyad 3 (non-abusing mothers and drug-abusing daughters) versus Dyad 4 membership ($\beta = .35, p < .001$). Drug abusing daughters reported more sex under the influence of substances. Attachment to mother did not emerge as a significant predictor in this model.

Sex Under the Influence of Drugs—Results indicated that the overall set of predictors was related to sex under the influence of drugs, accounting for 20% of variability, $F(8, 144) = 4.12, p < .001$. Of the 8 hypothesized predictors of sex under the influence of drugs, 2 were statistically significant in the final step of the model, including attachment ($\beta = -.21, p < .05$) and Dyad 1 (drug-abusing mothers and daughters) versus Dyad 4 (non-abusing mothers and daughters) membership ($\beta = .32, p < .01$). Drug abusing daughters with a drug abusing mother, and those reporting less attachment to their mother, reported more sex under the influence of drugs. Marital status may have failed to explain a significant portion of the variability in sex under the influence of drugs due to low statistical power resulting from the small number of married (15.2%) and unmarried (31.2%) daughters reporting sex under the influence of drugs.

Sex Under the Influence of Alcohol—Results indicated that the overall set of predictors was related to sex under the influence of alcohol, accounting for 29% of variability, $F(8, 144) = 6.91, p < .001$. Of the 8 hypothesized predictors of sex under the influence of alcohol, 6 were

statistically significant in the final step of the model, including daughter age ($\beta = .20, p < .05$), marital status ($\beta = -.24, p < .01$), attachment ($\beta = .19, p < .05$), Dyad 1 (drug-abusing mothers and daughters) versus Dyad 4 (non-abusing mothers and daughters) membership ($\beta = .50, p < .001$), Dyad 2 (drug-abusing mothers and non-abusing daughters) versus Dyad 4 membership ($\beta = .21, p < .05$), and Dyad 3 (non-abusing mothers and drug-abusing daughters) versus Dyad 4 membership ($\beta = .40, p < .001$). Older or unmarried daughters reported more sex under the influence of alcohol. In contrast to sex under the influence of alcohol, larger percentages of married (39.4%) and unmarried (67.9%) daughters reported engaging in sex under the influence of alcohol, thereby, increasing the power to detect marital status effects. Daughters with drug abusing mothers also report more sex under the influence of alcohol. Surprisingly, daughters with closer attachments to their mothers reported more sex under the influence of alcohol. Because this finding was counterintuitive and contrary to our hypothesis, we conducted a series of post hoc regression analyses to explore it.

Post Hoc Hierarchical Regression Analyses

We conducted two separate post hoc hierarchical regression analyses to investigate the positive association between attachment to mother and sex under the influence of alcohol. The analyses were conducted with two subsamples of daughters. The first subsample consisted of daughters with a drug abusing mother (Dyads 1 and 2), and the second subsample involved daughters with a non-drug abusing mother (Dyads 3 and 4). The aim of these analyses was to determine whether the positive association between attachment and sex under the influence of alcohol risk was unique to the daughters with a drug abusing mother—possibly reflecting transmission of the mother's risk behavior (Wilder & Watt, 2002). That is, we examined whether attachment to a drug abusing mother was associated with greater risk for sex under the influence of alcohol. The same sequence of variables and blocks used in the primary regression analysis was also used in these post hoc analyses. Because only two dyad types were included in each model, a single variable was used to represent dyad type.

Daughters with Drug Abusing Mothers—Fifty-four daughters with drug abusing mothers were used in the first post hoc analysis. Results indicated that the overall set of predictors was related to sex under the influence of alcohol, accounting for 23% of variability, $F(6, 53) = 2.35, p < .05$. Of the 6 hypothesized predictors of sex under the influence of drugs, 4 were statistically significant in the final step of the model, including daughter age ($\beta = .37, p < .05$), marital status ($\beta = -.35, p < .05$), attachment ($\beta = .37, p < .05$), and dyad membership ($\beta = .30, p < .05$). Once again, older or unmarried daughters reported more sex under the influence of alcohol. Drug abusing daughters with a drug abusing mother (Dyad 1) reported more sex under the influence of alcohol compared to non-drug abusing daughters with a drug abusing mother (Dyad 2). Daughters with greater attachment to their drug abusing mother reported more sex under the influence of alcohol.

Daughters with Non-Drug Abusing Mothers—Ninety daughters with non-drug abusing mothers were used in the second subsample analysis. Results indicated that the overall set of predictors was related to the sex under the influence of alcohol, accounting for 35% of variability, $F(6, 89) = 7.60, p < .0001$. Of the 6 hypothesized predictors of sex under the influence of drugs, 2 were statistically significant in the final step of the model, including marital status ($\beta = -.22, p < .05$) and Dyad 3 versus Dyad 4 membership ($\beta = .42, p < .001$). Again, unmarried daughters reported more sex under the influence of alcohol. Drug abusing daughters with a non-drug abusing mother (Dyad 3) reported more sex under the influence of alcohol risk compared to non-drug abusing daughters with a non-drug abusing mother (Dyad 4). Attachment was not related to sex under the influence of alcohol ($\beta = .14, p = .14$).

Discussion

The present study examined predictors of sexual behavior under the influence of alcohol and drugs among a community sample of adult Latinas. The results offer new knowledge concerning the association between adult Latina mother–daughter relations, substance abuse, and sexual behavior under the influence of substances, a rarely studied HIV risk behavior, especially in this population. Demographics (marital status, age), daughter and maternal substance abuse, and daughter attachment to mother each explained significant variance in sexual behavior under the influence of alcohol and/or drugs. Although this study has begun to identify salient familial and substance abuse related variables associated with sex under the influence of substances, future studies are needed to identify additional determinants of this hazardous risk behavior to help reduce health disparities in HIV contraction among adult Latinas in the U.S.

Age and marital status explained a significant portion of the variability in sex under the influence of alcohol. The finding that older daughters were more likely to engage in sexual behavior under the influence of alcohol, controlling for other predictors, is consistent with studies indicating that the highest rate of drinking among women occurs between the ages of 25 and 44 (National Institutes of Health, 2000). For unmarried Latinas, sexual activity may be more likely to occur in the context of their or their sexual partners' heavy drinking in comparison to married women. This suggests that alcohol abuse may particularly increase HIV risk among unmarried adult Latinas. This finding is consistent with others suggesting that alcohol and drug use decreases following marriage (Bachman et al., 2002). More statistical power may have been necessary to detect associations for sex under the influence of drugs. Given that sex under the influences of substances is associated with impaired decision making (Volkow, 2006) and with lower likelihood of condom use (Maisto, Carey, Carey, Gordon, & Schum, 2004), it is important for future research to use larger samples to explore the effects of marital status on sexual behavior under the influence of drugs.

Daughter nativity and length of time in the U.S. did not predict sex under the influence of substances, although it is important to note that daughters from the substance abusing dyads reported more time in the U.S. and were more often U.S. born. Nativity, immigration status, and language use have been found to be associated with sexual risk behaviors in Latina/o adolescents and young adults (Abraido-Lanza, Armbrister, Flórez, & Aguirre, 2006; Adam, McGuire, Walsh, Basta, & LeCroy, 2005; Afable-Munsuz & Brindis, 2006). Latinaimmigrants often struggle with balancing traditional Latino norms and values (e.g., forbidding premarital sex) with conflicting sets of sexual expectations and values espoused by their U.S. born peers and partners (Raffaelli & Ontai, 2001). Latino cultural directives or values, such as those encouraged by *marianismo*, often socialize Latinas to be submissive to their male partners and may impair Latinas' decision-making ability concerning the initiation of sexual intercourse resulting in greater sexual risk behaviors (Weeks, Schensul, Williams, Singer, & Grier, 1995). However, an association between nativity and length of time in the U.S. and sex under the influences did not emerge in the present study.

The absence of associations of nativity and time lived in the U.S. to sexual behavior under the influence of alcohol and drugs may be due, in part, to our use of a different sexual outcome than has been assessed in prior work. Variables related to length of time in the U.S. have been suggested as alternately protective or risk enhancing, based on the sexual outcome studied (Deardorff, Tschann, & Flores, 2008). For example, although greater acculturation to American cultural practices is related to earlier sexual activity in Latinas, once sexual activity has been initiated, low levels of acculturation to American practices are thought to place Latinas at risk for reduced condom use (Marin, Gomez, Tschann, & Gregorich, 1997). The null finding obtained in the present study may have resulted from aggregating these different sets of

relationships. Additionally, nativity and years spent in the U.S. may affect behavioral outcomes differently depending on the cultural context in which the person resides (Schwartz, Pantin, Prado, Sullivan, & Szapocznik, 2006). In Miami-Dade County, which has been a Latino ethnic enclave for two generations, individuals may not acculturate to American cultural practices with increasing time in the U.S. Years spent in the U.S. may, therefore, not be associated with cultural change for some immigrants to Miami and, perhaps, other ethnic enclaves as well.

Dyad Type

Not surprisingly, substance abusing daughters engaged in more sex under the influence of substances. This finding is consistent with literature citing the association of substance abuse with sexual risk behaviors among Latina women (Matos et al., 2004; Paxton et al., 2004). It is noteworthy that only substance-abusing daughters with a substance-abusing mother differed from non-abusing daughters with non-abusing mothers (the reference group) in sex under the influence of drugs. Unexpectedly, substance abusing daughters with a non-abusing mother were not statistically different from the reference group in terms of sex under the influence of drugs. In contrast, not only did substance-abusing daughters with substance-abusing mothers differ from the reference group in sex under the influence of alcohol, but surprisingly, non-abusing daughters with abusing mothers also reported more sex under the influence of alcohol when compared to the reference group. This complex pattern of findings suggests a particular risky effect of mother's substance abuse on daughter's sex under the influence of alcohol. Sex under the influence of alcohol was far more prevalent than sex under the influence of drugs. Thus, not only was there more statistical power to detect effects on sex under the influence of alcohol, but alcohol use is legal and more socially accepted than drug use. Nevertheless, given the present findings, alcohol abuse immediately prior to sexual behavior may be an important target for preventive efforts to reduce HIV contraction rates among adult Latinas.

Attachment to Mother

When alcohol and drugs were combined into a single *substance use* variable, attachment to mother failed to explain a significant portion of the variability in sex under the influence of substances. However, contrasting patterns emerged when sex under the influence of each substance was analyzed separately. As hypothesized, closer attachment to mother was related to less sex under the influence of drugs. Thus, attachment with mother appeared to serve as a protective mechanism against sex under the influence of drugs. However, attachment to a drug abusing mother was identified as a *risk* for sex under the influence of alcohol. Both of these findings may be viewed as consistent with Bogenschneider's (1996) ecological risk/protective theoretical framework and with Lerner's (1995) developmental-contextual perspective. As outlined earlier, the family represents the primary context for human development over the lifespan (Steinberg, 2001; Szapocznik & Coatsworth, 1999). Attachment to the mother may help to protect Latinas from obtaining drugs (or affiliating with drug-using sexual partners). However, because alcohol is widely available to adults, attachment to a substance using mother appeared to increase risk. Many substance abusing mothers identified alcohol as their drug of choice (second only to non-prescribed sedatives). It is possible, then, that risk for consumption of a specific substance—in this case alcohol—was responsible for the counter-intuitive finding. Attachment to an alcohol-abusing mother was associated with risk for heavy alcohol use prior to sexual activity in adult Latina women.

Limitations

The present findings should be interpreted in light of several important limitations. First, the cross-sectional design used in the present study does not permit causal inferences to be drawn. Future longitudinal research is needed to study the ways in which Latina mothers' substance abuse, as well as their daughters' substance abuse, affects the daughter's sexual behavior under

the influence of drugs and alcohol over the lifespan. Furthermore, it is also important to examine other parent–child pairings—such as father–daughter, father–son, and mother–son—in terms of sex under the influence of substances in Latina/os. Second, although it helps to recruit relatively small and dispersed populations, snowball sampling increases the likelihood of obtaining a nonrepresentative sample. To counter this limitation, efforts were undertaken to include participants from major Latino subgroups, such as Cuban Americans and Puerto Ricans. However, some groups (e.g., Mexican American and Puerto Rican) were not well represented due to their underrepresentation in the Miami-Dade County area in general. According to 2003 U.S. Census data (U.S. Census Bureau, 2007), Hispanic subgroups in Miami-Dade County constituted 60.97% of the total county population. The percentage of each subgroup was estimated as 30.98% Cuban, 23.35% Other Hispanic or Latino, 4.07% Puerto Rican, and 2.57% Mexican. Thus, the current study's sample was representative of Latinas living in Miami-Dade County, but not of the larger U.S. Latino population. Future studies are needed with nationally representative samples to enhance the generalizability of the present results. Third, sexual risk behaviors and substance abuse are highly stigmatized among Latinas, which often inhibits their discussing and revealing personal information with others (Larkey et al., 2002). Although assessors were trained to detect inconsistencies in participants' responses and to note such inconsistencies in a clinically and culturally sensitive manner (De La Rosa, Rahill, Rojas, & Pinto, 2007), socially desirable responding may have occurred. Finally, given that we attempted to recruit substance abusing participants through self-help support groups and announcements posted at local drug court programs (among other methods), the substance abusing participants may have been seeking help—or in trouble with the law—more often than would be obtained within a random sample.

Despite these limitations, the results from the current study can serve as a platform for future research investigating sexual decision making and sex under the influence of substances among Latinas. It is important for future research, as well as for substance abuse and HIV interventionists, to assess sexual behavior under the influence of alcohol and drugs among Latinas in the U.S. Interventionists and researchers should consider the particular risks for unmarried, older, and substance abusing Latinas, as well as those with a substance abusing mother. Focusing on these characteristics of risk may improve the efficacy of interventions with Latina participants and clients. Such culturally informed research and interventions also may help to identify additional contextual and intrapersonal factors affecting sex under the influence of alcohol and drugs among Latinas. Continued research and intervention development may help to facilitate the genesis and refinement of empirically based HIV and drug prevention and treatment programs for Latinas.

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Table 1

Summary of demographics, sexually transmitted infections, and unprotected sex rates for daughters across dyads

Demographics	Dyad 1: mother and daughter, abusers (<i>n</i> = 40)	Dyad 2: mother abuser, daughter non-abuser (<i>n</i> = 19)	Dyad 3: mother non-abuser, daughter abuser (<i>n</i> = 51)	Dyad 4: mother and daughter, non-abusers (<i>n</i> = 48)	Group comparisons
Age (years)					
<i>M</i> (<i>SD</i>)	23.42 (5.96)	24.58 (7.34)	28.86 (9.45)	30.67 (9.81)	$F(3, 156) = 6.25, p < .001, \eta^2 = .11$ Dyad 1 < Dyad 3, $p < .01$ Dyad 1 < Dyad 4, $p < .001$ Dyad 2 < Dyad 4, $p = .01$
Daughter's nativity					
Caribbean	4	4	10	14	$\chi^2(9, N = 158) = 31.27, p < .001, \eta^2 = .15$
Central America	9	0	6	3	
South America	2	4	10	19	
U.S.	25	1	25	12	
Assistance with immigration					
Yes	4	3	4	11	
No	12	5	22	25	$\chi^2(3, N = 158) = 2.49, p = .48, \eta^2 < .01$
Family of origin socioeconomic status ^a					
<i>M</i> (<i>SD</i>)	1.98 (0.53)	1.89 (0.57)	2.06 (0.54)	2.04 (0.50)	$F(3, 157) = 0.47, p = .71, \eta^2 < .01$
Personal income-past year ^b					
<i>M</i> (<i>SD</i>)	4.03 (3.02)	2.42 (1.68)	3.35 (2.44)	3.50 (2.68)	$F(3, 157) = 1.67, p = .18, \eta^2 = .03$
Education level ^c					
<i>M</i> (<i>SD</i>)	2.28 (1.26)	2.47 (0.96)	2.63 (1.18)	2.65 (0.91)	$F(3, 157) = 1.03, p = .38, \eta^2 = .02$
Employment status					
Employed	19	13	30	31	$\chi^2(3, N = 158) = 3.45, p = .32, \eta^2 = .02$
Unemployed	21	6	21	17	
Marital status					
Married	6	3	8	16	$\chi^2(3, N = 158) = 6.43, p = .09, \eta^2 = .04$
Unmarried	34	16	43	32	
Length of life in U.S. (%)					
<i>M</i> (<i>SD</i>)	73.70 (36.36)	75.37 (32.61)	68.94 (36.02)	49.03 (35.37)	$F(3, 154) = 4.78, p < .01, \eta^2 = .02$

Demographics	Dyad 1: mother and daughter, abusers (n = 40)	Dyad 2: mother abuser, daughter non-abuser (n = 19)	Dyad 3: mother non-abuser, daughter abuser (n = 51)	Dyad 4: mother and daughter, non-abusers (n = 48)	Group comparisons
Total number of sexually transmitted infections					
M (SD)	0.38 (0.67)	0.32(0.75)	0.32 (0.62)	0.33 (0.81)	Dyad 1 > Dyad 4, $p = .001$ Dyad 2 > Dyad 4, $p = .007$ Dyad 3 > Dyad 4, $p = .006$
Condom use ratio					
Oral sex (n = 122)					
M (SD)	0.07% (0.36)	No condom use reported	No condom use reported	2.92% (16.66)	$F(3, 121) = 0.86, p = .46, \eta^2 = .02$
Anal sex (n = 31)					
M (SD)	66.67% (57.74)	50.00% (70.71)	11.77% (33.21)	33.33% (50.00)	$F(3, 30) = 1.83, p = .17, \eta^2 = .17$
Vaginal sex (n = 140)					
M (SD)	37.73% (42.61)	53.96% (49.37)	35.51% (40.98)	30.84% (41.47)	$F(3, 139) = 1.16, p = .33, \eta^2 = .03$

^a 1 = Poorer than most, 2 = About the same as others, 3 = Richer than most

^b 1 = \$0 to 4999 to 11 = \$50,000 or more

^c 1 = less than high school to 5 = graduate degree

Table 2

Correlations among predictor and criterion variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. SUIISRI	–										
2. SUIDRI	.88**	–									
3. SUIARI	.73**	.34**	–								
4. Age	–.09	–.11	–.02	–							
5. Marital status ^a	–.22**	–.16	–.29**	.27**	–						
6. Length of life in U.S. (%)	.21*	.21*	.16	–.28**	–.11	–					
7. Nativity ^b	–.22**	–.19*	–.17*	.31**	.10	–.83**	–				
8. Dyad 1	.35**	.31**	.22**	–.27**	–.08	.14	–.19*	–			
9. Dyad 2	–.07	–.07	.02	–.12	–.05	.11	–.09	–.22**	–		
10. Dyad 3	.14	.03	.21*	.10	–.09	.08	–.04	–.40**	–.26**	–	
11. Dyad 4	–.43**	–.28**	–.44**	.23**	.20*	–.29**	.28**	–.39**	–.24**	–.46**	–
12. Attachment	–.19*	–.30**	.05	–.06	.08	–.16*	.14	–.29**	.09	.07	.14

Note: SUIISRI sex under the influence of substances risk index, SUIDRI sex under the influence of drugs risk index, SUIARI sex under the influence of alcohol risk index. Dyad 1 = drug-abusing mothers and daughters; Dyad 2 = drug-abusing mothers and non-abusing daughters; Dyad 3 = non-abusing mothers and drug-abusing daughters; Dyad 4 = non-abusing mothers and daughters

*
 $p < .05$

**
 $p < .01$

^a₀ = not married, 1 = married

^b₀ = U.S. born, 1 = non-U.S. born

Table 3

Descriptive statistics for predictor and criterion variables by dyad type

Variables	Dyad 1 <i>M (SD)</i>	Dyad 2 <i>M (SD)</i>	Dyad 3 <i>M (SD)</i>	Dyad 4 <i>M (SD)</i>
Attachment	80.51 (19.56)	94.68 (20.94)	91.80 (19.01)	94.00 (15.74)
Alcohol use—past 12 months ^a	2.77 (0.86)	2.96 (1.47)	2.90 (0.93)	2.04 (1.12)
Illicit drug use—past 12 months				
Sedatives ^a	1.83 (1.96)	1.06 (0.25)	1.84 (2.13)	1.47 (1.72)
Cannabis ^a	4.03 (2.99)	1.35 (1.00)	2.42 (2.30)	1.14 (0.65)
Stimulants ^a	1.78 (1.64)	1.00 (0.00)	1.17 (0.63)	1.16 (0.91)
Heroin ^a	1.03 (0.16)	1.00 (0.00)	1.12 (0.86)	1.00 (0.00)
Opioids ^a	1.08 (0.36)	1.00 (0.00)	1.06 (0.31)	1.16 (1.06)
Cocaine ^a	1.86 (1.88)	1.00 (0.00)	1.43 (1.36)	1.00 (0.00)
PCP ^a	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Hallucinogens ^a	1.00 (0.00)	1.00 (0.00)	1.02 (0.14)	1.00 (0.00)
Inhalants ^a	1.03 (0.16)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
SUISRI	7.79 (4.56)	4.88 (2.83)	6.31 (3.43)	3.00 (2.01)
SUIARI	5.05 (2.81)	4.19 (2.69)	4.85 (2.52)	2.19 (1.89)
SUIDRI	3.89 (3.15)	2.00 (2.29)	2.65 (2.72)	1.33 (1.29)

Note. *SUISRI* sex under the influence of substances risk index, *SUIDRI* sex under the influence of drugs risk index, *SUIARI* sex under the influence of alcohol risk index. Dyad 1 = drug-abusing mothers and daughters; Dyad 2 = drug-abusing mothers and non-abusing daughters; Dyad 3 = non-abusing mothers and drug-abusing daughters; Dyad 4 = non-abusing mothers and daughters

^a 1 = Never to 8 = Everyday

Table 4

Predictors of sex under the influence of substances risk index: results of a hierarchical regression model ($n = 145$)

Variable	B	SE B	β	t	R ²	ΔR^2	F	df
Step 1								
Age	-0.01	0.04	-.02	0.08				
Marital status	-1.98	0.78	-.22	-2.54*	.05	.05	3.76*	2, 144
Step 2								
Age	0.02	0.04	.04	0.46				
Marital status	-1.90	0.77	-.21	-3.12*				
Length of life in U.S. (%)	0.01	0.02	.08	0.52				
Nativity	-1.13	1.10	-.15	-1.03	.09	.04	3.53**	4, 144
Step 3								
Age	0.05	0.04	.10	1.26				
Marital status	1.33	0.71	-.15	-1.87				
Length of life in U.S. (%)	0.01	0.01	.05	0.41				
Nativity	-0.60	1.00	-.08	-0.60				
Dyad 1 versus Dyad 4	4.47	0.81	.52	5.55**				
Dyad 2 versus Dyad 4	1.57	0.99	.13	1.58				
Dyad 3 versus Dyad 4	2.84	0.74	.35	3.84**	.27	.18	7.22**	7, 144
Step 4								
Age	0.04	0.04	.09	1.12				
Marital status	-1.28	0.72	-.14	-1.79				
Length of life in U.S. (%)	0.01	0.01	.04	0.34				
Nativity	-0.61	1.00	-.08	-0.61				
Dyad 1 versus Dyad 4	4.33	0.84	.50	5.18**				
Dyad 2 versus Dyad 4	1.58	1.00	.13	1.59				
Dyad 3 versus Dyad 4	2.83	0.74	.35	3.83**				
Attachment	-0.01	0.02	-.05	-0.64	.27	.00	6.35**	8, 144

Note: Dyad 1 = drug-abusing mothers and daughters; Dyad 2 = drug-abusing mothers and non-abusing daughters; Dyad 3 = non-abusing mothers and drug-abusing daughters; Dyad 4 = non-abusing mothers and daughters

10. > *d*
**
50. > *d*
*

Table 5

Predictors of sex under the influence of drugs risk index: results of a hierarchical regression model ($n = 145$)

Variable	B	SE B	β	t	R ²	ΔR^2	F	df
Step 1								
Age	-0.02	0.03	-.07	-0.68				
Marital status	-0.88	0.55	-.14	-1.61	.03	.03	2.14	2, 144
Step 2								
Age	-0.01	0.03	-.02	-0.17				
Marital status	-0.82	0.54	-.13	-1.51				
Length of life in U.S. (%)	0.01	0.01	.15	1.03				
Nativity	-0.22	0.80	-.04	-0.28	.06	.03	2.32	4, 144
Step 3								
Age	0.01	0.03	.05	0.51				
Marital status	-0.59	0.53	-.10	-1.12				
Length of life in U.S. (%)	0.01	0.01	.14	0.99				
Nativity	0.01	0.77	.01	0.01				
Dyad 1 versus Dyad 4	2.28	0.61	.38	3.76**				
Dyad 2 versus Dyad 4	0.38	0.75	.05	0.52				
Dyad 3 versus Dyad 4	1.00	0.56	.18	1.79	.16	.10	3.68*	7, 144
Step 4								
Age	0.01	0.03	.01	0.04				
Marital status	-0.45	0.52	-.07	-0.86				
Length of life in U.S. (%)	0.01	0.01	.10	0.71				
Nativity	-0.05	0.75	-.01	-0.07				
Dyad 1 versus Dyad 4	1.90	0.61	.32	3.10**				
Dyad 2 versus Dyad 4	0.43	0.73	.05	0.59				
Dyad 3 versus Dyad 4	1.01	0.55	.18	1.85				
Attachment	-0.03	0.01	-.21	-2.46*	.20	.15	4.12	8, 144

Note: Dyad 1 = drug-abusing mothers and daughters; Dyad 2 = drug-abusing mothers and non-abusing daughters; Dyad 3 = non-abusing mothers and drug-abusing daughters; Dyad 4 = non-abusing mothers and daughters

*
p < .05

10^{-d}
**

Table 6

Predictors of sex under the influence of alcohol risk index: results of a hierarchical regression model ($n = 145$)

Variable	B	SE B	β	t	R ²	ΔR^2	F	df
Step 1								
Age	0.02	0.03	.07	0.80				
Marital status	-1.97	0.54	-.31	-3.62**	.09	.09	6.59**	2, 144
Step 2								
Age	0.04	0.03	.11	1.31				
Marital status	-1.92	0.54	-.30	-3.54**				
Length of life in U.S.	0.01	0.01	.07	0.46				
Nativity	-0.58	0.77	-.11	-0.75	.11	.03	4.31**	4, 144
Step 3								
Age	0.05	0.03	.16	1.86				
Marital status	-1.47	0.51	-.23	-2.88**				
Length of life in U.S.	0.01	0.01	.02	0.16				
Nativity	-0.32	0.72	-.06	-0.45				
Dyad 1 versus Dyad 4	2.72	0.58	.44	4.71**				
Dyad 2 versus Dyad 4	1.82	0.73	.21	2.50*				
Dyad 3 versus Dyad 4	2.29	0.53	.40	4.34**	.26	.15	7.22**	7, 144
Step 4								
Age	0.06	0.03	.20	2.33*				
Marital status	-1.59	0.50	-.25	-3.17**				
Length of life in U.S.	0.01	0.01	.05	0.42				
Nativity	-0.31	0.71	-.06	-0.44				
Dyad 1 versus Dyad 4	3.10	0.59	.50	5.28**				
Dyad 2 versus Dyad 4	1.79	0.71	.21	2.50*				
Dyad 3 versus Dyad 4	2.30	0.52	.40	4.43**				
Attachment	0.03	0.01	.19	2.49*	.29	.03	6.29	8, 144

Note: Dyad 1 = drug-abusing mothers and daughters; Dyad 2 = drug-abusing mothers and non-abusing daughters; Dyad 3 = non-abusing mothers and drug-abusing daughters; Dyad 4 = non-abusing mothers and daughters

10. > d
**
50. > d
*