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Substance Use as a Risk Factor for Intimate Partner Violence Overlap: Generational Differences Among Hispanic Young Adults

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Abstract

Intimate partner violence (IPV) research often focuses on either the victims of IPV or the perpetrators of IPV. Recent studies have documented the existence of a group of victim-perpetrators, for example, they perpetrate IPV and are also the victims of IPV. The current study examines this overlap in IPV perpetration and victimization among a nationally representative, longitudinal sample of 1,488 Hispanics with a focus on generational status. Results from group-based trajectory models and survey multinomial regression techniques suggest that alcohol and marijuana use over time are salient risk factors for IPV perpetration, IPV victimization, and IPV overlap. Study limitations and implications are discussed.

Keywords

intimate partner violence; Hispanics; victimization; offending; overlap

Introduction

Intimate partner violence (IPV) is an important public health problem (Eaton et al., 2008; Field & Caetano, 2005; U.S. Department of Health and Human Services, 2005). Among young adults in the United States, 18.3% reported IPV perpetration in their most recent relationship, and 11.9% reported both perpetration and victimization (Charles, Whitaker, Le, Swahn, & Diclemente, 2011). IPV is also associated with substance abuse, depression, suicidality, and several other negative health consequences (Ackard, Neumark-Sztainer, & Hannan, 2003; Swahn, Bossarte, & Sullivent, 2008; Temple & Freeman, 2011).

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A growing body of literature indicates an overlap between IPV victimization and perpetration (Charles et al., 2011; Cunradi, Ames, & Duke, 2011; Jennings, Park, Tomisich, Gover, & Akers, 2011; Melander, Noel, & Tyler, 2010; Reingle, Staras, Jennings, Branchini, & Maldonado-Molina, 2012). Studies, both in the United States and internationally, provide support for the overlap between victimization and perpetration (Cunradi et al., 2011; Jennings et al., 2011; McKinney, Caetano, Ramisetty-Mikler, & Nelson, 2009; Paterson, Feehan, Butler, Williams, & Cowley-Malcolm, 2007). Compared to IPV victimization or perpetration only, violence overlap tends to occur more frequently and results in more severe injuries (Swahn, Alemdar, & Whitaker, 2010; Whitaker, Haileyesus, Swahn, & Saltzman, 2007).

Studies conducted in the United States have documented an association between substance use (alcohol and marijuana) and the victim-perpetrator overlap (Caetano, Ramisetty-Mikler, & Field, 2005; Cunradi, 2007; Reingle et al., 2012; Walton, Chermack, & Blow, 2002). Some studies conducted in the United States and internationally have documented a relationship between alcohol use and IPV overlap (Caetano et al., 2005; Cunradi, 2007), whereas other studies have found no significant relationship between increased alcohol use and IPV (Caetano, Field, Ramisetty-Mikler, & McGrath, 2005; Caetano, Vaeth, & Ramisetty-Mikler, 2008). In contrast, the literature presents robust evidence that marijuana use has been associated with IPV overlap, independent of alcohol consumption (Reingle et al., 2012).

Ethnic minority groups, specifically Blacks and Hispanics, are at greatest risk of IPV overlap (Caetano et al., 2005; Caetano et al., 2008; Cunradi, 2007; Field & Caetano, 2005). A cross-sectional study using 1,935 Black, White, and Hispanic adults in the United States, who participated in the National Household Survey on Drug Abuse, found that IPV overlap was highest among Blacks (16.4%) and Hispanics (10.2%) compared to Whites (6.0%; Cunradi, 2007). Similarly, another United States-based, longitudinal study found that IPV overlap was highest among Blacks and Hispanics (Caetano et al., 2005).

The effect of generational status on IPV among Hispanics has yielded mixed results in the literature. Garcia and colleagues surveyed a sample of Mexican women in California to analyze the relationship between IPV and acculturation as measured by the Acculturation Rating Scale of Mexican Americans-II (Garcia, Hurwitz, & Kraus, 2005). Results indicated that Latinas, who were more acculturated (i.e., second to fifth generation status, preferred English), had increased odds of reporting IPV. Other researchers report similar findings using generational status (Jasinski, 1998; Sorenson & Telles, 1991) and other proxies of acculturation (Caetano, Ramisetty-Mikler, Vaeth, & Harris, 2007; Ingram, 2007). On the other hand, in a national sample of Hispanic couples, Cunradi and colleagues did not find a significant relationship between nativity status and IPV (Cunradi, 2009). Caetano, Ramisetty-Mikler, and McGrath (2004) report similar findings using different proxies of acculturation. To our knowledge, only Cunradi (2009) looked at the relationship between generational status (nativity status), substance use, and IPV and found no significant relationship. Studies using other proxies of acculturation have found a positive relationship between alcohol use and acculturation among Hispanic women (Caetano, Ramisetty-Mikler,

& McGrath, 2004) but no mediational effect of alcohol on IPV (Caetano et al., 2004; Caetano et al., 2007).

There is theoretical justification as to why these differences in IPV might differ by generational status or acculturation. For instance, a body of literature has documented the existence of the “immigrant paradox,” or the tendency for Hispanics who were born in other countries to have more favorable health outcomes than those who were born in the United States (Prado, Szapocznik, Schwartz, Maldonado-Molina, & Pantin, 2008; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Several explanations for this phenomenon have been proposed, including the deterioration of Hispanic cultural and family values, and increased exposure to risk behavior in the United States (Prado et al., 2008; Vega, Gil, & Kolody, 2002). Because ecological and proximal risk factors may operate differently between U.S.- and foreign-born youth and young adults, an evaluation of the generational differences in IPV among Hispanics is warranted.

The Current Study

The purpose of this study is to examine the overlap in IPV using a longitudinal, nationally representative sample of Hispanic adolescents and young adults who reside in the United States. No studies to the authors' knowledge have examined the victim-perpetrator overlap among Hispanics with attention to alcohol and marijuana use and by generational status specifically. To address this gap, three research questions were examined: (1) What is the prevalence of overlap between IPV perpetration and victimization among Hispanic young adults? (2) Are there generational differences in IPV prevalence among Hispanic young adults? and (3) What role does alcohol and marijuana use during adolescence play on IPV in early adulthood among Hispanics? Based upon the literature and evidence of theoretical differences that exist by generational status, we hypothesize that there will be considerable overlap between IPV victimization and perpetration; generational differences will exist in the prevalence of IPV overlap; and alcohol and marijuana use during adolescence will be identified as risk factors associated with IPV overlap during early adulthood.

Method

Data were obtained from Hispanic adolescents who participated in Waves I (1994–1995), II (1995–1996), III (2001–2002), and IV (2007–2008) of the restricted-use sample of the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a nationally representative sample of 80 high schools and 52 middle schools in the United States. Data were collected via face-to-face interview, and adolescents were interviewed separately from their parents at Wave I. Waves II–IV included data only on the adolescents who participated in Wave I (parents were not re-interviewed). Additional details describing the Add Health data collection procedures are described elsewhere (Harris et al., 2003). In accordance with the Add Health sampling design (Chantala & Tabor, 1999), 1,448 Hispanics comprised the nationally representative cohort.

Measures

Dependent Variable

IPV—The dependent variable was created from 6 items that were intended to measure perpetration and victimization during the 12 months prior to Wave IV. Interviewers tailored these questions to respondents' gender and marital status by substituting “your partner” with “your boyfriend/husband/partner” or “your girlfriend/wife/partner.” Three items measured victimization: (1) “How often did (your partner) threaten you with violence, push or shove you, or throw something at you that could hurt?” (2) “How often has (your partner) slapped, hit, or kicked you?” and (3) “How often did you have an injury, such as a sprain, bruise, or cut because of a fight with (your partner)?” Participants who reported one or more IPV victimization behaviors were categorized as victims.

Three items measured IPV perpetration: (1) “How often did you threaten (your partner) with violence, push, or shove (him or her), or throw something at (him or her) that could hurt?” (2) “How often did you slap, hit, or kick (your partner)?” and (3) “How often did (your partner) have an injury, such as a sprain, bruise, or cut because of a fight with you?” Participants who reported one or more of these perpetration behaviors were categorized as perpetrators. If the respondent reported both IPV victimization and IPV perpetration, he or she was categorized to have experienced IPV overlap.

Independent Variables

Generational status—Nativity status was categorized into three groups: first generation immigrant, second generation U.S.-born, and third generation U.S.-born and beyond. Two items were used to create these categories: “Was your [biological mother or father] born in the United States?” and “Were you born in the United States?” Youth who responded they were not born in the United States were categorized as “first generation immigrants.” Those who responded they were born in the United States and at least one of their parents was foreign-born were coded as “second generation U.S.-born;” and those who responded that both their parents were born in the United States were coded as “third and beyond generation U.S.-born.”

Alcohol use—Trajectories of alcohol use were estimated across Waves I to III (Figure 1). Alcohol use in the past month was assessed using the item, “During the past 12 months, on how many days did you drink alcohol?” at each Wave. The seven response options were offered and included in analysis: “Never used;” “1–2 days per year;” “less than once a month;” “2–3 days per month;” “1–2 days per week;” “3–5 days per week;” and “every day or almost every day.” Alcohol use was evaluated as a risk factor for IPV to examine whether the frequency of use increased the likelihood of IPV (Caetano et al., 2005; Cunradi, 2007; Walton et al., 2002).

Marijuana use—Trajectories of marijuana use were estimated across Waves I to III (Figure 2). Marijuana use in the past month was assessed using the item, “During the past 30 days, how many times did you use marijuana?” at each Wave. Marijuana use was measured in five categories: (1) no use; (2) 1–5 times; (3) 6–10 times; (4) 11–30 times; and (5) 31 or

more uses. For analysis, each group was assigned its approximate mean value. Marijuana use was evaluated as a risk factor for IPV among Hispanics to extend previous findings that marijuana and other drug use increased the likelihood of IPV (Caetano et al., 2005; Walton et al., 2002).

Alcohol and marijuana use—Respondents were grouped into three categories based upon their patterns of alcohol and marijuana use across Waves I–III. Those who were nonusers of both alcohol and marijuana across all three waves were categorized as “nonusers.” The second group included those who reported using either alcohol or marijuana only, and the final group included those who reported using both substances. This measure was included in the analysis to examine whether a group of high-risk, polysubstance users exists (Reingle et al., 2012).

Covariates—In addition to trajectories of alcohol and marijuana use, we used covariates at Wave I as predictors of IPV at Wave IV to account for baseline risky behavior. Based on the literature on the association between IPV and substance use (Ackard, et al., 2003; El-Bassel, Gilbert, Wu, Chang, & Fontdevila, 2007; Roberts, Klein, & Fisher, 2003), we included depression, parental involvement, peer marijuana and alcohol use, and parental alcohol use.

Depression—This mental health status variable was measured with 1 item, “How often in the past week have you felt sad or depressed?” Values for this variable were dichotomized into “no instances of depression” and “one or more instances” of depression in the past week. Depression was included as a covariate because higher levels of depression have been associated with drug use, violence (Thurnherr, Berchtold, Pierre-Andre, Akre, & Suris, 2008), and other risk behaviors (Latzman & Swisher, 2005).

Parental involvement—Parental influence and involvement was measured using a scale of 20 items (10 for maternal involvement, 10 measuring paternal involvement; Prado et al., 2009). Each individual item was a binary variable (0 = *low involvement*; 1 = *high involvement*), and the scale was comprised of the sum of all 20 items (range: 0–20). For respondents' mother and father, each participant answered 10 items about whether a variety of activities have occurred in the past 4 weeks: (1) going shopping; (2) playing a sport; (3) attending a religious or church-related event; (4) talking about someone they are dating or a party they attended; (5) attending a movie, play, concert, or sporting event; (6) talking about a personal problem they were having; (7) having a serious argument about their behavior; (8) talking about work or grades; (9) working on a project for school; and (10) talking about other things they are doing in school. Cronbach's coefficient α for this scale was .74. This scale was included as a covariate because evidence suggests that parenting variables (e.g., monitoring, involvement) are related to violent behavior (Park, Morash, & Stevens, 2010). This scale has been validated and utilized in previous research using the current data set (Prado et al., 2009; Sieving et al., 2001).

Peer marijuana and alcohol use—Peer alcohol use was measured using 1 item: “Of your three best friends, how many drink alcohol at least once a month?” For analysis, we dichotomized peer alcohol use as “no friends drink” and “one or more friends drink” due to the skewed distribution. Similarly, respondents were asked, “Of your three best friends, how

many use marijuana at least once a month?” For analysis, we dichotomized peer marijuana use as “no friends use” and “one or more friends use marijuana.” These items were included because literature suggests that individuals who have peers who use marijuana (Herrenkohl et al., 2007; Leech, Day, Richardson, & Goldschmidt, 2003) are more likely to engage in risky behavior.

Parental alcohol use—Parental alcohol use was measured using 1 item on the parent survey, “How often do you drink alcohol?” For analysis, respondents were dichotomized as “nonusers” and “alcohol users.” This variable was included in the analysis as a measure of access to alcohol in the home, as well as “home risk.” Youth who have parents that model risky behavior are more likely to participate in similarly risky behavior when they become adults (Herrenkohl et al., 2007).

Demographics

Ethnicity—Ethnicity was recorded using the item: “Are you of Hispanic or Latino background?” Those who responded “yes” to this ethnicity item were categorized as “Hispanics,” regardless of how the “race” item was answered.

Age—The respondents' age was calculated by subtracting their birth date from the Wave I survey participation date.

Sex—Sex was self-reported by respondents, who indicated whether they identified as “male” or “female.”

Analytical Strategy

Consistent with the recommendations for Add Health data analysis, analyses were conducted in accordance with the clustered dual-stage sampling design, and observations were weighted due to the unequal probability of selection of each primary sampling unit (Chantala & Tabor, 1999). Survey multinomial regression techniques, an extension of logistic regression methods for multiple nominal groups, were used to provide weighted effect estimates and confidence intervals.

Trajectory groups for alcohol and marijuana use were grouped based upon consumption patterns longitudinally (Waves I–III, average ages 16–26). Group-based trajectory models are finite mixture models, which use single- and multiple-group structures (Nagin, 2005) to represent the heterogeneity in a finite number of latent groups. The violence data resembled a Poisson distribution with a large number of zeros (i.e., no reported alcohol or marijuana use). Therefore, a zero-inflated Poisson distribution was specified for the trajectory models (Jones, Nagin, & Roeder, 2001). This analytical strategy fit with the longitudinal nature of the data. In addition, there was enough variability in the alcohol and marijuana measures to justify classifying users according to trends over time.

We selected the alcohol and marijuana trajectory group model with the best “fit,” determined to be the smallest number of trajectory groups that maximized the model selection criteria (Adjusted Bayesian Information Criterion [BIC], Akaike Information Criterion [AIC]). To increase our confidence in the validity of the latent groups, posterior

probabilities were estimated for each individual, and cases were assigned to the group with the highest probability (Nagin, 2005; Nagin & Tremblay, 2001). SAS PROC TRAJ was used for trajectory analyses (Jones et al., 2001; SAS Institute, 2004).

To test for generational differences between substance use trajectory groups and IPV, survey multinomial regression was used. Three separate models were estimated to test each of the three research questions described above: (1) the effect of generational status as a risk factor for substance use (alcohol, marijuana, and both alcohol and marijuana trajectory groups); (2) the effect of generational status on IPV groups (non-IPV, victim only, perpetrator only, victim and perpetrator); and (3) the effect of substance use groups (marijuana, alcohol, and both alcohol and marijuana) on IPV. Respondents in the non-IPV category served as the dependent variable reference group for all models, and the nonsubstance users served as the reference group for the independent variables. Foreign-born Hispanics served as the reference group for analyses by generation. All analyses were conducted using STATA 10 (StataCorp, 2009).

Results

Study Population

Table 1 reports relevant descriptive characteristics of the sample. Briefly, the cohort was 47.4% male, with a mean age of 15.5 ($SE = 0.04$) at Wave I. Hispanic first generation immigrants comprised 35.9% of the sample, 24.7% were second generation U.S.-born, and 39.4% self-identified as third generation or above.

Prevalence of the Overlap

Among Hispanic young adults, 31.3% reported IPV. The prevalence of IPV included: 13.3% overlap between victimization and perpetration, followed by victimization only (12.8%) and perpetration only (5.3%). There were no significant differences in the prevalence of IPV by generational status [compared to immigrant youth, second generation ($z = -0.24$, $p = .811$) or third generation and above ($z = -0.66$, $p = .507$) were not significantly different].

Prevalence of Alcohol and Marijuana Use

Five groups of alcohol users were identified. Among adolescents, 20.3% did not use alcohol at any Wave (defined as nonalcohol users). Late-onset escalators (23.1%) began using alcohol at age 16 and increased their use as they aged. Decreasing users (6.5%) initiated alcohol prior to age 15 and decreased their use over time, and early-onset escalators (21.2%) began using alcohol at age 15 and increased their use with age. Consistent alcohol users (28.8%) had high levels of alcohol use consistently between the ages of 15 and 21. Table 2 details the relationship between generational status, alcohol, and marijuana use typologies. Significant generational differences were observed in the prevalence of alcohol use among Hispanic youth. When compared with Hispanic immigrants, second and third generation U.S.-born youth were more like to be early-onset, decreasing users, and consistent users.

Three groups of marijuana users were identified: Non-marijuana users (67.5%), low-level users (20.9%), and high-level (11.6%) users. Significant differences were observed between

Hispanic immigrants and third generation U.S.-born youth. When compared with immigrants, third generation U.S.-born Hispanic youth were more like to report low-level marijuana use (odds ratio [OR] = 2.36), high-level marijuana use (OR = 2.46), and both alcohol and marijuana use (OR = 1.88). No significant differences were observed in the prevalence of monthly marijuana use between Hispanic immigrants and second and third generation U.S.-born youth.

Effects of Alcohol and Marijuana Use on IPV

Table 3 shows the relationship between alcohol and marijuana use trajectory groups and IPV overlap. After adjusting for several covariates (i.e., gender, age, peer alcohol use, peer marijuana use, parental involvement, parental alcohol use, and depression), marijuana use was a significant predictor of IPV. High-level marijuana users were at increased risk of being in the victim-only (OR = 2.33) and victim and perpetrator (OR = 2.03) categories. Similarly, youth who reported both alcohol and marijuana use during adolescence were at higher risk of being in the IPV overlap (OR = 1.86) group in early adulthood.

Discussion

Among Hispanics, one in three young adults reported IPV. The majority reported victimization, either alone (13%) or combined with perpetration (13%), followed by 5% of young adults who reported perpetration only. These findings are largely consistent with previous studies examining the prevalence of the victim-perpetrator overlap among the general population and with regard to IPV specifically (Charles et al., 2011; Cunradi et al., 2011; Jennings et al., 2011; Reingle et al., 2012).

Unexpectedly, there were no generational differences in prevalence of IPV among Hispanic young adults. Various explanations have been suggested to explain why Hispanics are at higher risk of IPV, including feelings of powerlessness, poverty, discrimination, stress due to lack of opportunity, and familial factors (e.g., lack of social support; Caetano et al., 2005; Caetano et al., 2008). It is possible that these risk factors operate across generational statuses, negatively affecting all Hispanic populations. The risk factors that are unique to Hispanics may also be reflected in the high prevalence of IPV compared to other racial/ethnic groups.

Consistent with previous studies, marijuana use is an important predictor for IPV. Among Hispanic young adults, youth who reported high-level marijuana use during adolescence had twice the risk of victimization only or victimization and perpetration compared to non-marijuana users. For instance, marijuana use during adolescence was associated with increased risk of IPV. These findings are consistent with previous studies, which suggest that marijuana use is predictive of victimization and physical assault by their partners (Moore & Stuart, 2005; Nabors, 2010; Railford, Wingood, & Diclemente, 2007). More specifically, these results are consistent with prior literature, which has found that marijuana use is predictive of the overlap between victimization and perpetration in dating violence in the general population (Reingle et al., 2012).

Although the role of marijuana use in IPV remains unclear, a number of potential explanations for this relationship may be proposed. For example, marijuana use may be an indicator of personality characteristics, including impulsivity and antisocial personality types. Alternatively, marijuana use may serve as a mediator in the relationship between mental health disorders and IPV. Further exploration of the mechanism by which marijuana increases risk of IPV is a direction for future research.

Findings should be interpreted in light of a few limitations. First, because we could not assess alcohol or marijuana use at the time of the IPV occurrence, it is unclear how event-specific substance use relates to IPV. Second, we were unable to account for baseline IPV, as such measures were not developmentally appropriate to be included in Waves I or II of the Add Health data. Third, the analysis did not account for relationship characteristics (casual dating, marriage, cohabitation, discordance of race/ethnicity, demographics), and these variables may have an impact on IPV (Buzawa, Buzawa, & Stark, 2011). Finally, we were not able to incorporate measures of child maltreatment and exposure to IPV in the home during childhood among parents (Jennings et al., 2011). As such, future research should further examine the link between alcohol use, marijuana use, and IPV controlling for child maltreatment and childhood exposure to IPV when data permit.

Despite its limitations, the current study has a few important strengths. First, we used prospective data to evaluate the relationship between marijuana and alcohol use and IPV across two developmental life-course periods (adolescence and early adulthood). Second, the study also included a nationally representative sample of Hispanic adolescents and young adults, who were grouped by nativity status to examine generational differences in IPV. Few studies have examined the prevalence of IPV among Hispanics (Caetano et al., 2005; Caetano et al., 2008), and no studies have examined the relationship between alcohol and marijuana use and IPV with a focus on generational differences among Hispanics. Finally, the current study evaluated patterns of marijuana and alcohol use over time rather than the typical dichotomized measure of drug use. This is strength in that substance use changes over time and these patterns may significantly impact participation in IPV.

More importantly, findings have implications for the development and implementation of IPV prevention programs. Violence prevention efforts should focus attention on multiple substances, including marijuana. Moreover, IPV prevention efforts must recognize the overlap between victimization and perpetration, and programs should examine the complex relationship between drug use, particularly marijuana use, and IPV. Prevention programming should begin early to prevent initiation of marijuana use, as the current study suggests that marijuana use has begun and is a risk factor for IPV even before age 15. Future studies should examine the relationship between exposure to IPV during adolescence and future victimization and perpetration of IPV as young adults.

In conclusion, marijuana use during adolescence nearly doubles the risk of IPV victimization and the overlap of IPV victimization and perpetration. Future studies should examine the association between the event-specific co-occurrence of alcohol use, marijuana use, and IPV. Also, the role of marijuana as a mediator of behavioral and/or psychological risk factors should be further investigated to understand the mechanism by which marijuana

increases risk of IPV. Findings have implications for IPV prevention efforts, as marijuana use should be a target of preventative and early IPV intervention programs.

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References

- Ackard DM, Neumark-Sztainer D, Hannan P. Dating violence among a nationally representative sample of adolescent girls and boys: Associations with behavioral and mental health. *Journal of Gender Specific Medicine*. 2003; 6:39–48. [PubMed: 14513575]
- Buzawa, E.; Buzawa, CG.; Stark, E. Responding to domestic violence: The integration of criminal justice and human services. 4th. Thousand Oaks, CA: SAGE; 2011.
- Caetano R, Field CA, Ramisetty-Mikler S, McGrath C. The 5-year course of intimate partner violence among white, black, and Hispanic couples in the United States. *Journal of Interpersonal Violence*. 2005; 20:1039–1057. [PubMed: 16051726]
- Caetano R, Ramisetty-Mikler S, Field CA. Unidirectional and bidirectional intimate partner violence among white, black, and Hispanic couples in the United States. *Violence and Victims*. 2005; 20:393–406. [PubMed: 16250407]
- Caetano R, Ramisetty-Mikler S, McGrath C. Acculturation, drinking, and intimate partner violence among Hispanic couples in the United States: A longitudinal study. *Hispanic Journal of Behavioral Sciences*. 2004; 26:60–78.
- Caetano R, Ramisetty-Mikler S, Vaeth PAC, Harris TR. Acculturation stress, drinking, and intimate partner violence among Hispanic couples in the U.S. *Journal of Interpersonal Violence*. 2007; 22:1431–1447. [PubMed: 17925291]
- Caetano R, Vaeth PAC, Ramisetty-Mikler S. Intimate partner violence victim and perpetrator characteristics among couples in the United States. *Journal of Family Violence*. 2008; 23:507–518.
- Chantala, K.; Tabor, J. Strategies to perform a design-based analysis using the add health data. National longitudinal study of adolescent health. 1999. Retrieved from <http://www.cpc.unc.edu/projects/addhealth/data/guides/weight1.pdf>
- Charles D, Whitaker DJ, Le B, Swahn M, Diclemente RJ. Differences between perpetrators of bidirectional and unidirectional physical intimate partner violence. *Partner Abuse*. 2011; 3:344–364.
- Cunradi CB. Drinking level, neighborhood social disorder, and mutual intimate partner violence. *Alcoholism: Clinical and Experimental Research*. 2007; 31:1012–1019.
- Cunradi CB. Intimate partner violence among Hispanic men and women: The role of drinking, neighborhood disorder, and acculturation-related factors. *Violence and Victims*. 2009; 24:83–97. [PubMed: 19297887]
- Cunradi CB, Ames GM, Duke M. The relationship of alcohol problems to the risk for unidirectional and bidirectional intimate partner violence among a sample of blue-collar couples. *Violence and Victims*. 2011; 26:147–158. [PubMed: 21780531]
- Eaton DK, Kann L, Kinchen S, Shanklin S, Ross J, Hawkins J, et al. Wechsler H, Centers for Disease Control and Prevention (CDC). Youth risk behavior surveillance-United States, 2007. *MMWR Surveillance Summaries*. 2008; 57:1–131.
- El-Bassel N, Gilbert L, Wu E, Chang M, Fontdevila J. Perpetration of intimate partner violence among men in methadone treatment programs in New York city. *American Journal of Public Health*. 2007; 97:1230–1232. [PubMed: 17538056]
- Field CA, Caetano R. Intimate partner violence in the U.S. general population: Progress and future directions. *Journal of Interpersonal Violence*. 2005; 20:463–469. [PubMed: 15722502]
- Garcia L, Hurwitz EL, Kraus JF. Acculturation and reported intimate partner violence among Latinas in Los Angeles. *Journal of Interpersonal Violence*. 2005; 20:569–590. [PubMed: 15788555]

- Harris, KM.; Florey, F.; Tabor, JW.; Bearman, PS.; Jones, J.; Udry, JR. The national longitudinal study of adolescent health: Research design. 2003. Retrieved from <http://www.cpc.unc.edu/projects/addhealth/design>
- Herrenkohl TI, McMorris BJ, Catalano RF, Abbott RD, Hemphill SA, Toumbourou JW. Risk factors for violence and relational aggression in adolescence. *Journal of Interpersonal Violence*. 2007; 22:386–405. [PubMed: 17369443]
- Ingram EM. A comparison of help seeking between Latino and non-Latino victims of intimate partner violence. *Violence Against Women*. 2007; 13:159–171. [PubMed: 17251503]
- Jasinski JL. The role of acculturation in wife assault. *Hispanic Journal of Behavioral Sciences*. 1998; 20:175–191.
- Jennings WG, Tomisich EA, Gover AR, Akers RL. Assessing the overlap in dating violence perpetration and victimization among South Korean college students: The influence of social learning and self control. *American Journal of Criminal Justice*. 2011; 36:188–206.
- Jones BL, Nagin DS, Roeder K. A SAS procedure based on mixture models for estimating developmental trajectories. *Sociological Methods & Research*. 2001; 29:374–393.
- Latzman RD, Swisher RR. The interactive relationship among adolescent violence, street violence, and depression. *Journal of Community Psychology*. 2005; 33:355–371.
- Leech SL, Day NL, Richardson GA, Goldschmidt L. Predictors of self-reported delinquent behavior in a sample of young adolescents. *The Journal of Early Adolescence*. 2003; 23:78–106.
- McKinney CM, Caetano R, Ramisetty-Mikler S, Nelson S. Childhood family violence and perpetration and victimization of intimate partner violence: Findings from a national population-based study of couples. *Annals of Epidemiology*. 2009; 19:25–32. [PubMed: 18835525]
- Melander LA, Noel H, Tyler KA. Bidirectional, unidirectional and nonviolence: A comparison of the predictors among partnered young adults. *Violence and Victims*. 2010; 25:617–630. [PubMed: 21061868]
- Moore TM, Stuart GL. A review of the literature on marijuana and interpersonal violence. *Aggression and Violent Behavior*. 2005; 10:171–192.
- Nabors EL. Drug use and intimate partner violence among college students: An in-depth exploration. *Journal of Interpersonal Violence*. 2010; 25:1043–1063. [PubMed: 19952373]
- Nagin, DS. Group-based modeling of development. Cambridge, MA: Harvard University Press; 2005.
- Nagin DS, Tremblay RE. Analyzing developmental trajectories of distinct but related behaviors: A group-based method. *Psychological Methods*. 2001; 6:18–34. [PubMed: 11285809]
- Park S, Morash M, Stevens T. Gender differences in predictors of assaultive behavior in late adolescence. *Youth Violence and Juvenile Justice*. 2010; 8:314–331.
- Paterson J, Feehan M, Butler S, Williams M, Cowley-Malcolm ET. Intimate partner violence within a cohort of Pacific mothers living in New Zealand. *Journal of Interpersonal Violence*. 2007; 22:698–721. [PubMed: 17515431]
- Prado G, Huang S, Schwartz S, Maldonado-Molina MM, Bandiera F, De la Rosa M, Pantin H. What accounts for differences in substance use among U.S. born and Foreign born Hispanic adolescents? Results from a longitudinal prospective cohort study with a nationally representative sample of Hispanic adolescents. *Journal of Adolescent Health*. 2009; 45:118–125. [PubMed: 19628137]
- Prado G, Szapocznik J, Schwartz SJ, Maldonado-Molina MM, Pantin H. Drug abuse prevalence, etiology, prevention, and treatment in Hispanic adolescents: A cultural perspective. *Journal of Drug Issues*. 2008; 38:5–36.
- Railford JL, Wingood GM, Diclemente RJ. Prevalence, incidence, and predictors of dating violence: A longitudinal study of African American female adolescents. *Journal of Women's Health*. 2007; 16:822–833.
- Reingle JM, Staras SA, Jennings WG, Branchini J, Maldonado-Molina MM. The relationship between marijuana use and intimate partner violence in a nationally representative, longitudinal sample. *Journal of Interpersonal Violence*. 2012; 27:1562–1578. [PubMed: 22080574]
- Roberts TA, Klein JD, Fisher S. Longitudinal effects of intimate partner abuse on high-risk behavior among adolescents. *Archives of Pediatrics & Adolescent Medicine*. 2003; 157:875–881. [PubMed: 12963592]

- SAS Institute. SAS/STAT 9.1 User's Guide. Cary, NC: Author; 2004.
- Schwartz SJ, Unger JB, Zamboanga BL, Szapocznik J. Rethinking the concept of acculturation: Implications for theory and research. *The American Psychologist*. 2010; 65:237–251. [PubMed: 20455618]
- Sieving RE, Beuhring T, Resnick MD, Bearinger LH, Shew M, Ireland M, Blum RW. Development of adolescent self-report measures from the national longitudinal study of adolescent health. *Journal of Adolescent Health*. 2001; 28:73–81. [PubMed: 11137909]
- Sorenson SB, Telles CA. Self-reports of spousal violence in a Mexican-American and non-Hispanic white population. *Violence and Victims*. 1991; 6:3–15. [PubMed: 1859804]
- StataCorp. Stata statistical software: Release 11. College Station, TX: Author; 2009.
- Swahn MH, Alemdar M, Whitaker DJ. Nonreciprocal and reciprocal dating violence and injury occurrence among urban youth. *Western Journal of Emergency Medicine*. 2010; 11:264–268. [PubMed: 20882147]
- Swahn MH, Bossarte RM, Sullivent EE. Age of alcohol use initiation, suicidal behavior, and peer and dating violence victimization and perpetration among high-risk, seventh-grade adolescents. *Pediatrics*. 2008; 121:297–305. [PubMed: 18245421]
- Temple JR, Freeman DH. Dating violence and substance use among ethnically diverse adolescents. *Journal of Interpersonal Violence*. 2011; 26:701–718. [PubMed: 20587475]
- Thurnherr J, Berchtold A, Pierre-Andre M, Akre C, Suris J. Violent adolescents and their educational environment: A multilevel analysis. *Journal of Developmental and Behavioral Pediatrics*. 2008; 29:351–359. [PubMed: 18714210]
- U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. 2005. Retrieved February 2, 2011, from <http://www.healthypeople.gov>
- Vega WA, Gil AG, Kolody B. What do we know about Latino drug use? Methodological evaluation of state databases. *Hispanic Journal of Behavioral Sciences*. 2002; 24:395–408.
- Whitaker DJ, Haileyesus T, Swahn M, Saltzman LS. Differences in frequency of violence and reported injury between relationships with reciprocal and nonreciprocal intimate partner violence. *American Journal of Public Health*. 2007; 97:941–947. [PubMed: 17395835]
- Walton MA, Chermack ST, Blow FC. Correlates of received and expressed violence persistence following substance abuse treatment. *Drug and Alcohol Dependence*. 2002; 67:1–12. [PubMed: 12062775]

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Figure 1.
Trajectories of past-year alcohol use among Hispanics.

Figure 2.
Trajectories of past-month marijuana use among Hispanics.

Table 1
Descriptive Information for Hispanics, Waves I–IV (*n* = 1,448)

	<i>n</i>	%
Demographics, Wave I		
Male	686	47.4
Age	15.5 (0.04)	
Generation		
First generation immigrant	519	35.9
Second generation U.S.-born	358	24.7
Third generation U.S.-born	570	39.4
Marijuana use, Waves I–III		
Nonuser	977	67.5
Low-level marijuana user	303	20.9
High-level marijuana user	168	11.6
Alcohol use, Waves I–III		
Nonuser	294	20.3
Late-onset escalator	335	23.1
Early-onset escalator	307	21.2
Decreasing user	95	6.5
Consistent user	417	28.8
Intimate partner violence, Wave IV		
Nonviolent	954	68.7
Victim only	178	12.8
Perpetrator only	73	5.3
Victim and perpetrator	184	13.3
Covariates		
Peer alcohol use	865	59.7
Peer marijuana use	563	38.9
Parental involvement	5.41 (0.19)	
Parental alcohol use	708	48.9
Depression	675	46.6

Table 2
Generational Differences in Substance Use Trajectory Groups (Waves I–III)

	Second generation U.S.-born ^a		Third and beyond generation U.S.-born ^a	
	OR	95% CI	OR	95% CI
Alcohol use				
Nonuser	1.00	—	1.00	—
Late-onset escalator	1.37	[0.83, 2.26]	1.27	[0.76, 2.12]
Early-onset escalator	1.78*	[1.04, 3.05]	2.69***	[1.70, 4.24]
Decreasing user	3.70**	[1.43, 9.58]	5.36***	[2.24, 12.81]
Consistent user	1.73*	[1.12, 2.68]	2.29**	[1.44, 3.64]
Marijuana use				
Nonuser	1.00	—	1.00	—
Low-level user	1.01	[0.52, 1.99]	2.36***	[1.50, 3.70]
High-level user	0.63	[0.32, 1.21]	2.46**	[1.49, 4.05]
Co-occurrence of alcohol and marijuana use				
Neither alcohol or marijuana use	1.00	—	1.00	—
Used alcohol or marijuana only	0.51**	[0.33, 0.80]	0.51**	[0.32, 0.79]
Used both alcohol and marijuana	0.70	[0.41, 1.21]	1.88**	[1.24, 2.86]

Note.

^aFirst generation immigrant served as the reference group for these analyses.

*
 $p < .05$.

**
 $p < .01$.

 $p < .001$.

Table 3
Trajectories of Alcohol and Marijuana Use as Predictors of Intimate Partner Violence (Age 26)

	Victim only ^a		Perpetrator only ^a		Victim and perpetrator ^a	
	OR	95% CI	OR	95% CI	OR	95% CI
Alcohol use						
Nonuser	1.00	—	1.00	—	1.00	—
Late-onset escalator	1.05	[0.57, 1.96]	1.13	[0.21, 2.86]	0.88	[0.45, 1.75]
Early-onset escalator	0.61	[0.22, 1.65]	0.77	[0.21, 2.73]	0.91	[0.50, 1.65]
Decreasing user	1.54	[0.64, 3.74]	0.16	[0.03, 1.03]	1.38	[0.57, 3.33]
Consistent user	1.06	[0.46, 2.42]	1.28	[0.44, 3.74]	1.10	[0.64, 1.90]
Marijuana use						
Nonuser	1.00	—	1.00	—	1.00	—
Low-level user	1.25	[0.64, 2.41]	1.19	[0.70, 4.13]	1.60	[0.88, 2.91]
High-level user	2.33**	[1.25, 4.37]	0.70	[0.18, 2.77]	2.03*	[1.15, 3.60]
Co-occurrence of alcohol and marijuana use						
Neither alcohol or marijuana use	1.00	—	1.00	—	1.00	—
Used alcohol or marijuana only	0.89	[0.45, 1.77]	0.85	[0.33, 2.19]	0.92	[0.59, 1.42]
Used both alcohol and marijuana	1.44	[0.70, 3.00]	1.26	[0.39, 4.05]	1.86*	[1.07, 3.23]

Note. Adjusted for demographics (age, gender, and generational status) and several covariates (peer alcohol use, peer marijuana use, parental involvement, parental alcohol use, depression).

^aReference: Nonviolent.

* $p < .05$.

** $p < .01$.