Published in final edited form as:

J Adolesc Health. 2009 January ; 44(1): 14–24. doi:10.1016/j.jadohealth.2008.08.001.

Immigration Measures and Reproductive Health Among Hispanic Youth: Findings from the National Longitudinal Survey of Youth, 1997–2003

Jill A. McDonald, Ph.D.^{a,*}, Jennifer Manlove, Ph.D.^b, and Erum N. Ikramullah, B.A.^b

^aDivision of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia

^bChild Trends, Washington, DC Manuscript received March 3, 2008; manuscript accepted July 23, 2008

Abstract

Purpose—To explore relationships between immigration measures and risk of reproductive and sexual events among U.S. Hispanic adolescents.

Methods—We examined generation status, language in the home and country of origin in relation to sexual activity, contraception, and childbearing among 1614 Hispanic adolescents, using nationally representative 1997–2003 longitudinal data. Multivariable analyses controlled for potentially confounding variables. Tests for effect modification by gender and Mexican origin were conducted.

Results—Fewer first generation adolescents transitioned to sexual intercourse before age 18 (odds ratio [OR] = .80, 95% confidence interval [CI] = .66–.98) and fewer first and second generation sexually active teens used contraceptives consistently at age 17 (OR = .32, 95% CI = .17–.60 and OR = .50, 95% CI = .31–.80, respectively) than third-generation teens. Language was similarly associated with the transition to sexual intercourse and contraceptive practices. Versus teens of Mexican origin, teens of Puerto Rican origin and origins other than Cuba and Central/South America had greater odds of becoming sexually active; youth of all origins except Central/South America had fewer multiple live births (OR = .14–.31). Gender modified the effects of generation on consistent use of contraceptives and condoms at age 17. Gender also modified the effect of country of origin on transitioning to sexual intercourse before age 18 years.

Conclusions—Results expand on previous observations that generation, language, and country of origin are predictors of reproductive and sexual risks for Hispanic adolescents. These immigration measures may therefore be useful in targeting community and clinical preventive services.

Keywords

Reproductive health; Hispanic; Adolescent pregnancy; Epidemiology; Disparities; Immigration; Acculturation; Language; Mexican-American; Gender

* Address correspondence to: 4770 Buford HWY NE, MS K-22, Atlanta, GA 30341-3724. ezm5@cdc.gov.

Adolescent birth rates among Hispanic individuals in the United States have changed little since 2002 and remain the highest of any racial/ethnic subgroup [1]. The incidence of human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) and other sexually transmitted infections (STIs) are also disproportionately high among young Hispanics [2–4]. In addition to these disparities [1–5], rapid growth in the Hispanic population [6] makes reproductive health practices among adolescents an important subject for study. Increased knowledge of variations in risk across Hispanic communities is especially critical.

Recent literature has examined the potential role of acculturation in explaining birthrate and health disparities among Hispanic adolescents [7]. The process of acculturation involves retaining or separating from country of origin gender roles and other cultural norms while at the same time resisting or acquiring new host country norms. Different acculturation models have been proposed to explain how this complicated process may influence reproductive and sexual behavior [8]. In part because the process is poorly understood, acculturation is inconsistently measured. Several studies have employed nativity, generation and language use as proxy measures for acculturation and have examined them in relation to childbearing and sexual behavior, such as contraceptive use and timing of first sexual intercourse [8].

Generation status

In general, later generation status appears to correspond with earlier initiation of sexual intercourse and lower rates of adolescent childbearing, while findings related to use of contraceptives are equivocal. Several studies of male and female adolescents [9,10] and of Latinas only [11–15] report that U.S-born or second-and-higher generation Hispanic adolescents are more likely to become sexually active or report a history of sexual risk [15] than first-generation adolescents. Two studies, however, failed to find any significant association [16,17] and another [18] found earlier sexual activity among first-generation teens. Studies of fertility among Mexican-American and Puerto Rican adolescents found higher rates of childbearing [13], premarital births [12], and unintended pregnancy [18] for first-generation than later generation teens. An earlier, nationally based study of Hispanic females [14], however, found a higher rate of premarital first birth among third generation Mexican American youth than among first and second generations. Research linking generation to contraceptive use is more limited. Results from two community-based convenience samples with small numbers of respondents found a greater likelihood of participation in postpartum family planning among first-generation Latinas [19] on the one hand, but no relationship between generation and contraceptive use at last sexual intercourse [11] on the other.

Language

Like belonging to later generations, adoption of English has been associated with a history of sexual intercourse among Hispanic adolescents in several studies. [10,16,20–22] English predominance has also been linked to recent condom use [21] and higher risk of adolescent pregnancy [22]. In addition, one analysis of school-based data from the National Longitudinal Study of Adolescent Health that examined the combined effects of language

and time spent in the U.S. [10], found that U.S.-born youth or youth residing in the U.S. for 12 or more years, who also lived in English-speaking homes, were more likely to be sexually experienced than those in Spanish-speaking homes.

Country of origin

Hispanic adolescent fertility differs by country of origin, with the highest birth rates among Mexican origin teens and the lowest among Cuban origin teens; rates among Puerto Rican origin teens fall slightly behind those for Mexican-American adolescents [1]. Heterogeneity in fertility suggests variation in other reproductive and sexual health behavior by country of origin, such as age at first intercourse and use of contraception [23]. Behavioral differences by country of origin may be caused by differences in the degree of acculturation, as measured by duration of residency in the U.S. and adoption of English language, as well as differences in cultural norms, reasons for immigration, and other factors related to the country of origin [24,25]. Unfortunately, few previous studies have been large and diverse enough to examine the reproductive experience of Hispanic adolescents by country of origin. In all but a few reports [12,15,17], Mexican-American adolescents comprised the majority of the study populations.

Although patterns are emerging, results from acculturation studies are limited and inconsistent. The 1997 National Longitudinal Survey of Youth (NLSY97) [26], a large, nationally representative, U.S. Department of Labor database, presents an opportunity to add to these results. It includes information on reproductive health and is large enough to examine country of origin among Hispanics. In addition to language and generation status, it also contains measures of socioeconomic status, family characteristics and other factors known to be associated with adolescent reproductive health. The purpose of the current study is to examine the relationships between generation, language status, and country of origin and key reproductive and sexual health events among Hispanic adolescents using NLSY97 data. Understanding these relationships can help target pregnancy prevention, STI prevention, and health promotion services to high-risk groups within the growing Hispanic population.

Methods

Sample

NLSY97 collects information annually on a broad range of topics from a cohort of 8,984 U.S. adolescents who were aged 12–16 years on December 31, 1996. The current study uses longitudinal data, collected during 1997–2003 [26,27]. Baseline interviews were conducted with each youth and a participating parent in 1997; in subsequent years only youth were interviewed. By 2003, cohort members had reached ages 18–22 years. Respondent ethnicity was provided by the household informant at the initial screening interview. We limited our analysis to 1,614 adolescents who 1) were either defined as of Hispanic, Latino, or Spanish origin, or had a Cuban, Mexican, Mexican American, Puerto Rican, Chicano, or other Hispanic or Spanish origin biological parent, and 2) had a biological parent who also completed a survey.

Outcome variables

Transition to sexual intercourse before age 18 was determined from youth responses to two questions: 1) “Have you ever had sexual intercourse, that is, made love, had sex, or gone all the way with a person of the opposite sex?” and 2) “Thinking about the very first time in your life that you had sexual intercourse with a person of the opposite sex, how old were you?”

Contraceptive use at first sex and Condom use at first sex were coded using responses to “Did you or your sexual partner use any birth control method, or do anything to avoid pregnancy such as natural family planning, the first time you had intercourse?” and “Still thinking about that first time that you had sexual intercourse, did you or your sexual partner use a condom, either to avoid pregnancy or for some other reason?”

Consistent contraceptive use at age 17 and Consistent condom use at age 17 were defined as 100% agreement between the frequency of sex and the frequency of contraceptive/condom use during the year in which the youth became age 17. Because frequency of condom use was not included in NLSY97 until 1998, consistency of use was determined at age 18 for 31 youth who were already age 17 at the time of the baseline interview. Youth who did not have sexual intercourse during that year were excluded from the analysis.

Transition to a live birth before age 20 was coded positive if one or more births occurred before the youth’s 20th birthday. Since birth data were corrected and updated each survey year, we used data from the 2003 interview. Multiple live births were defined as two or more births, regardless of the respondent’s age at the time of birth.

Immigration measures

Generation status was based on questions that asked if youth and parents were born in the United States. Youth born outside the U.S. were coded as first-generation, youth born in the U.S. with at least one biological parent born outside the U.S. were coded as second-generation, and youth born in the U.S. with both biological parents born in the U.S. were coded as third-generation. U.S.-born youth with one U.S.-born biological parent and missing birthplace information for the second biological parent (n = 136) were coded as third-generation.

Language status was determined using parental response to the question, “Do you now speak any language other than English at home?” and interviewer coding of whether the youth and biological parent surveys were administered in Spanish or English. Language status was classified into four categories: (1) youth interview conducted in Spanish, (2) parental interview conducted in Spanish (but youth interview conducted in English), (3) youth and parental interviews conducted in English but responding parent speaks a different language at home, and (4) youth and parental interviews conducted in English and responding parent does not speak a second language at home. In analyses of outcomes measured at age 17, we collapsed the last two categories into one.

Country of origin was based on responses to “In which country were you born?” for youth and parents born outside the United States (U.S.); for U.S.-born youth and parents,

responses to “What is your origin or descent?” were used. We classified responses into five categories: Mexico, Puerto Rico, Cuba, Central or South America, and other origin. U.S.-born youth whose U.S.-born parents were of “Chicano,” “other Hispanic,” and “other Spanish,” descent were coded as “other” country of origin. In instances where multiple countries of origin were reported, we coded the more specific response or the most distant country. In analyses of outcome variables measured at age 17 we collapsed categories 3–5.

Covariates

To control for potential confounding from factors associated with the outcomes under study, we included nine individual and family baseline characteristics in each multivariable model. Individual characteristics were gender and age in years on December 31, 1996. Family characteristics included family structure (two biological/adoptive parents, one biological/adoptive parent, or one biological/adoptive parent plus one other parent), parental education (less than high school, high school, or at least some college), history of adolescent birth in the mother, annual household income (continuous in \$10,000 increments), number of full and half siblings (continuous), rural/urban residence, and census region (Northeast, Northcentral, South, or West). Missing values were substituted with the mean or mode for the nonmissing values; for annual household income, the only variable with greater than 5% missing, we included a flag variable to indicate missing data in all models.

Statistical analysis

We calculated the weighted proportion of youth with each characteristic, overall and in the Mexican-American, male and female subsamples. Pearson’s Chi-square was used to detect differences between males and females. We conducted bivariate Chi-square analyses to describe variations in outcomes by generation, language status, and country of origin in the full Hispanic sample. Relationships between transition to sexual intercourse before age 18 years and adolescent birth and immigration factors were examined using life-table analysis techniques [28]. Controlling for the covariates listed in Table 1, we performed multivariate event history [29] and logistic regression [30] analyses to assess the separate and combined effects of generation, language status, and country of origin on each outcome. Odds ratios, 95% confidence limits, and p values were computed for all variables. Chi-square and F-statistics were calculated for each event history and logistic regression model, respectively.

In additional analyses, we tested for interaction between gender and the separate effects of generation, language and country of origin. We also tested for interaction between Mexican origin and generation and Mexican origin and language in models that combined the effects of generation, language and country of origin. When evidence of interaction was found ($p < .05$), we computed odds ratios (ORs), 95% confidence intervals (95% CIs) and p values for each estimate for each subgroup. All analyses were conducted using Stata software [31].

Results

Sample characteristics

Overall, two-thirds of adolescents transitioned to sexual intercourse before age 18 years, one-fifth had a birth before age 20, and 9% had two or more births by age 18–22 (Table 1).

Among sexually experienced youth, 73% used contraception at first intercourse, mostly condoms; among those sexually active the year they turned age 17 years, 52% were consistent contraceptive users and 45% consistent condom users. More Hispanic youth were third-generation than first- or second-generation Americans, one-third lived in households in which English was the only language spoken, and about one-half were of Mexican origin. Although Mexican origin youth appeared similar to Hispanic youth overall, 13% versus 9% reported multiple births, and 46% versus 52% of those sexually active used contraception consistently at age 17. In addition, unlike the full sample, more Mexican origin youth were second rather than third-generation, and one in five lived in a household in which only English was spoken. Males more often than females were sexually experienced before age 18 years and were consistent condom users at age 17. On the other hand, males fathered fewer births and were less apt to use condoms at first sex.

Bivariate results

Generation was associated with contraceptive use at first sex and contraceptive consistency at age 17, with first-generation youth least likely and third-generation youth most likely to be users (Table 2). Language status was similarly associated with these outcomes, with Spanish-speaking youth showing the least tendency and youth residing in English-only households the greatest tendency toward contraceptive use. Finally, youth from different countries of origin had different likelihoods of having at least one birth before age 20 and of having multiple live births during the study period. For example, 24% of adolescents of Mexican origin had a birth in their teen years, versus 13% of Puerto Rican adolescents and 6% of Cuban adolescents.

Multivariate results

Odds ratios associated with each immigration measure for each outcome are presented in Table 3. In models that examined the effects of generation separately, first-generation youth had lower odds of transitioning to sex before age 18 years ($OR = .80$, 95% $CI = .66-.98$) and first- and second-generation youth had lower odds of consistent contraceptive use at age 17 ($OR = .32$, 95% $CI = .17-.60$, and $OR = .50$, 95% $CI = .31-.80$, respectively), as compared with third-generation youth. In combined models that included all three immigration factors, the effects of generation on transition to sex were attenuated, whereas the effects of generation on contraceptive consistency persisted.

We observed similar relationships between language and the outcomes studied. Youth interviewed in Spanish had lower odds of transitioning to sex, and youth with a parent who spoke a language besides English at home, had lower odds of contraceptive use at first sex, as compared with youth in English-only households. In addition, all youth in Spanish-speaking or multilingual households had lower odds of consistent contraceptive use at age 17. In the combined models, all language findings were attenuated, except for the decreased odds of contraception use at first sex among youth with a parent who spoke another language at home.

In models that examined the effects of country of origin separately, Hispanic youth of Puerto Rican and “other” origin had greater odds of transitioning to sex before age 18 ($OR = 1.35$

and 1.29, respectively) and Puerto Rican, Cuban, and “other” origin youth had lower odds of multiple live births ($OR = .18, .14, \text{ and } .31$, respectively), as compared with Mexican youth. In the combined models, the finding for Puerto Rican youth transitioning to sex earlier was attenuated while all other findings persisted.

Interaction effects

A few statistically significant interactions were noted (Table 4). In models limited to generation effects, gender modified the relationship with consistency of contraceptive use and consistency of condom use at age 17. Second-generation females, but not males, had reduced odds of consistent contraceptive use compared with their third-generation peers ($OR = .28$, 95% $CI = .15\text{--}.53$). On the other hand, first-generation males had lower odds of consistent condom use than third-generation males ($OR = .35$, 95% $CI .13\text{--}.90$), whereas no significant association for females was observed. In models limited to the effects of country of origin, only females of “other” countries of origin had greater odds of transitioning to sexual intercourse before age 18 than females of Mexican origin. No gender–language interactions were found. When these interactions were examined in the combined models, only the gender–generation interaction on contraceptive consistency remained (data not shown). Mexican origin did not modify associations between generation or language status and any outcome studied.

Discussion

We found that generation, language status, and country of origin were associated with reproductive health events in a nationally representative sample of Hispanic youth. Earlier generation and Spanish language were associated with delayed transition to first sex and less than consistent use of contraception. Language was similarly related to contraceptive use at first sex. Country of origin was associated with a transition to sex before age 18 years and having multiple live births. Mexican origin youth had higher odds of multiple live births than youth from Cuba or Puerto Rico or “other” countries of origin, a finding consistent with the higher teen birth rate among Mexican-American youth in the United States [1]. The associations with generation and country of origin persisted in models that examined all three immigration factors simultaneously. The only association with language that persisted in the combined models was a lower odds of contraceptive use at first sex among youth in multilingual households.

The finding that first-generation male and female adolescents transitioned to sexual intercourse later than third-generation youth is consistent with the majority of previous literature [9–18], which mainly focused on Hispanic females. Our findings of less consistent contraception use at age 17 among first-generation males and females and among second-generation females, as well as less consistent condom use among first-generation males, have not been reported previously to our knowledge. These findings link higher levels of acculturation to increased contraceptive use as well as increased sexual activity. However, the higher birth rates among Hispanic adolescents in the U.S. today suggest that acculturation with respect to contraception is lagging behind acculturation with respect to

sexual activity. Forces of acculturation do not necessarily affect reproductive behaviors to the same degree.

Our findings with respect to language confirm previous research linking greater use of English to sexual experience [10,16,20–22]. Although we found evidence that English as the dominant language was associated with greater contraceptive consistency and use at first sex, we did not find an association between language and condom use. An earlier Detroit-based study, using different measures of condom use and language, found no relationship between acculturation and condom use in the previous year but did find that condom use with a “well known” partner was more common among English-language–dominant females [21]. Differences in how the behavior was measured may in this case account for finding different associations, and such differences may explain other inconsistencies in the literature.

Study strengths and weaknesses

This study has numerous strengths. It presents recent data on a large, nationally representative sample of Hispanic adolescents: participants came from a household sample that included both in-school and out-of-school youth, and, unlike many previous studies, both males and females were included. The sample size was sufficient to control for important confounding variables. In addition, the dataset contained detailed information on multiple immigration measures that allowed us to examine the effects of such measures jointly and separately. Participation rates were high: 90% of Hispanic teens in households selected for study completed the baseline interview, and 86% of those completed the 2003 interview [26,32]. The Department of Labor used an audio-based, computer-assisted self-interview approach that protected respondent privacy, and questionnaires were administered in both English and Spanish. Finally, the study design, which involved annual reinterviews and updating of information, was likely to have reduced measurement error.

The study’s most significant weakness is probably the potential for bias in self-reports of sensitive or socially undesirable behavior despite careful questionnaire design and assurances of confidentiality. The proportions of Hispanic youth in our study who reported transitioning to sex before age 18 years and condom use at first sex, however, are consistent with those reported in other national surveys [33]. A second weakness is the lack of parental interviews for 410 excluded youth, which may have affected the representativeness of the sample. Those excluded were less likely to live with both biological parents, and their parent education levels were lower as compared with our final sample of 1,614 adolescents. We do not know to what extent lack of parental interview may have been related to measures of immigration. A third weakness is the small number of sampled youth from countries other than Mexico, which reduced the precision in those estimates. Future research will have to oversample youth from countries other than Mexico. Finally, because of underreporting of abortion in self-reported surveys [34,35], we used numbers of live births instead of pregnancies as the unit of analysis for the two fertility outcomes. This makes direct comparison between this study and previous studies that counted pregnancies [10,22] difficult.

We do not have information about how these three measures map to culturally defined gender roles (such as *marianismo* or *machismo*), religiosity, familialism, or other important Hispanic cultural norms [8,36] that may directly influence reproductive and sexual behavior. Neither do we have contextual information from the society of origin, the new settlement society, or the immigration history, which may also shape adolescent reproductive health and behavior. As a result, we cannot explain the relationships between these three proxy measures for acculturation and specific reproductive health events and outcomes. However, these measures do serve as convenient, practical, and easily measured markers of high and low risk groups of Hispanic youth.

Recommendations

Few current pregnancy and STI prevention programs in the U.S. have been evaluated with respect to their effectiveness among Hispanic adolescents [37]. However, until such evidence of effectiveness is obtained, programs providing education and contraceptive services to Hispanics should give priority to first-generation youth, Spanish-speaking youth, and those living in Spanish-speaking households. Programs focusing on preventing repeat adolescent pregnancy are most needed by Mexican-American youth, regardless of generation or language status.

Programs for Hispanic youth that are sensitive to important culture-specific issues related to reproductive behavior need to be developed and evaluated. Different programs may be necessary for Hispanic youth of different generations [38]. A bilingual program developed specifically for first-generation youth, who are less likely to have sex and also less prepared to use contraception when they do engage in sex, might then be available for Hispanic communities experiencing steep increases in births, a marker for first-generation immigration [39].

Conclusion

In conclusion, this study makes an important contribution to the growing literature on factors affecting reproductive behaviors among Hispanic adolescents. These effects should be reexamined in other population-based datasets that include information on immigration-related measures. To facilitate identification of Hispanic subgroups, information about generation, language, and country of origin should be collected on forms used in program admission, surveillance instruments, and study questionnaires. Taking these steps may improve the provision of sexual and reproductive health services to U.S. Hispanic youth by targeting those subgroups at highest risk.

Acknowledgments

Partial funding for this paper was provided through a research grant from the Centers for Disease Control and Prevention on Maternal, Infant and Reproductive Health: National and State Coalition Capacity Building. The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention. The authors thank Len Paulozzi, M.D., for helpful review of the manuscript.

References

- [1]. Hamilton BE, Martin JA, Ventura SJ. Accessed December 17, 2007 Births: Preliminary data for 2006. National Vital Statistics Reports 2007. 56
- [2]. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. [Accessed July 18, 2008] HIV/AIDS surveillance report. 2006. [Online]. Vol. 182008:1–55. Available at: <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2006report/>
- [3]. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. [Accessed July 18, 2008] Sexually transmitted disease surveillance, 2006. 2007. [Online] Available at: <http://www.cdc.gov/std/stats/toc2006.htm>
- [4]. Augustine, J; Bridges, E; Young people and HIV. [Accessed July 18, 2008] Advocates for Youth. 2008. <http://www.advocatesforyouth.org/publications/factsheet/fshivaid.htm>
- [5]. Ventura, SJ, et al. Health e-stats. National Center for Health Statistics; Hyattsville, MD: 1990–2002. Recent trends in teenage pregnancy in the United States. Available at: <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/teenpreg1990-2002/teenpreg1990-2002.htm> [Accessed December 17, 2007]
- [6]. U.S. Census Bureau. [Accessed December 17, 2007] U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin. Available at: <http://www.census.gov/ipc/www/usinterimproj/>
- [7]. Lara M, et al. Acculturation and Latino health in the United States: A review of the literature and its sociopolitical context. Annu Rev Public Health. 2005; 26:367–97. [PubMed: 15760294]
- [8]. Afable-Munsuz A, Brindis CD. Acculturation and the sexual and reproductive health of Latino youth in the United States: A literature review. Perspect Sex Reprod Health. 2006; 38:208–19. [PubMed: 17162313]
- [9]. Ebin VJ, et al. Acculturation and interrelationships between problem and health-promoting behaviors among Latino adolescents. Journal of Adolescent Health. 2001; 28:62–72. [PubMed: 11137908]
- [10]. Guilamo-Ramos V, et al. Acculturation-related variables, sexual initiation and subsequent sexual behavior among Puerto Rican, Mexican, and Cuban youth. Health Psychology. 2005; 24:88–95. [PubMed: 15631566]
- [11]. Jimenez J, Potts MK, Jimenez DR. Reproductive attitudes and behavior among Latina adolescents. Journal of Ethnic and Social Diversity in Social Work. 2002; 11:221–49.
- [12]. Landale NS, Huan SM. Migration and premarital childbearing among Puerto Rican women. Demography. 1996; 33:429–42. [PubMed: 8939416]
- [13]. Aneshensel CS, et al. Onset of fertility-related events during adolescence: A prospective comparison of Mexican American and non-Hispanic white females. Am J Public Health. 1990; 80:959–63. [PubMed: 2368858]
- [14]. Darabi KF, Ortiz V. Childbearing among young Latino women in the United States. American Journal of Public Health. 1987; 77:25–8. [PubMed: 3789232]
- [15]. Raffaelli M, Zamboanga BL, Carlo G. Acculturation status and sexuality among female Cuban American college students. J Am Coll Health. 2005; 54:7–13. [PubMed: 16050323]
- [16]. Upchurch DM, Aneshensel CS, Mudgal J. Sociocultural contexts of time to first sex among Hispanic adolescents. J Marriage Fam. 2001; 63:1158–69.
- [17]. Fraser D, et al. Effects of acculturation and psychopathology on sexual behavior and substance use of suicidal Hispanic adolescents. Hispanic J Behav Sci. 1998; 20:83–101.
- [18]. Brindis C, et al. The associations between immigrant status and risk behavior patterns in Latino adolescents. J Adolesc Health. 1995; 17:99–105. [PubMed: 7495832]
- [19]. Jones ME, Kubelka S, Bond ML. Acculturation status, birth outcomes, and family planning compliance among Hispanic teens. J School Nurs. 2001; 17:83–9.
- [20]. Adam MB, et al. Acculturation as a predictor of the onset of sexual intercourse among Hispanic and white teens. Arch Pediatr Adolesc Med. 2005; 59:261–5.
- [21]. Ford K, Norris AE. Urban Hispanic adolescents and young adults: Relationship of acculturation to sexual behavior. J Sex Res. 1993; 30:316–23.

- [22]. Kaplan CP, Erickson PI, Juarez-Reyes M. Acculturation, gender role orientation, and reproductive risk-taking behavior among Latina adolescent family planning clients. *J Adolesc Res.* 2002; 17:103–21.
- [23]. Stroup-Benham CA, Treviño FM. Reproductive characteristics of Mexican-American, mainland Puerto Rican, and Cuban-American women: Data from the Hispanic Health and Nutrition Examination Survey. *J Am Med Assoc.* 1991; 265:222–6.
- [24]. Foulkes R, et al. Opportunities for action: Addressing Latina sexual and reproductive health. *Perspect Sex Reprod Health.* 2005; 37:39–44. [PubMed: 15888402]
- [25]. Driscoll AK, Biggs MA, Brindis CD. Adolescent Latino reproductive health: A review of the literature. *Hispanic J Behav Sci.* 2001; 23:255–326.
- [26]. Bureau of Labor Statistics. U.S. Department of Labor: NLSY97 User's Guide: A Guide to Rounds 1–9 Data, National Longitudinal Survey of Youth 1997, Chapter 2: Sample design and fielding procedures. Center for Human Resource Research, The Ohio State University; Columbus, Ohio: 2007. [Online]. Available at: <http://www.nlsinfo.org/nlsy97/docs/97HTML00/97guide/toc.htm> [Accessed February 29, 2008]
- [27]. Bureau of Labor Statistics. U.S. Department of Labor: NLSY97 User's Guide: A Guide to the Rounds 1–7 Data. Center for Human Resource Research, The Ohio State University; Columbus, Ohio: 2005.
- [28]. Allison, PD. *Survival Analysis Using SAS System: A Practical Guide.* SAS Institute Inc; Cary, NC: 1997.
- [29]. Allison, PD. *Event History Analysis.* Sage Publications; Beverly Hills, CA: 1984.
- [30]. Menard, S. *Sage University paper series on quantitative applications in the social sciences.* Sage; Thousand Oaks, CA: 1995. *Applied logistic regression analysis.*
- [31]. StataCorp. *Stata Statistical Software: Release 9.* StataCorp LP; College Station, TX: 2005.
- [32]. Moore, W, , et al. NLYS97 Technical Sampling Report, Chapter 2: Design of the NLSY97 sample. National Opinion research Center; Chicago, IL: 2000. [Online]. Available at: <http://www.nlsinfo.org/preview.php?filename=nlsy97techsamprpt.pdf> [Accessed February 29, 2008]
- [33]. Abma JC, et al. Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. *Vital Health Stat Series 23.* 2004; 24:1–48.
- [34]. Jones EF, Forrest JD. Underreporting of abortion in surveys of U.S. women: 1976 to 1988. *Demography.* 1992; 29:113–26. [PubMed: 1547898]
- [35]. Jones, R, Kost, K. Reporting of induced and spontaneous abortion in the 2002 National Survey of Family Growth, The National Survey of Family Growth Research Conference 2006. The National Center for Health Statistics; Hyattsville, MD: 2006.
- [36]. Villarruel AM, Jemmott JB, Jemmott LS, West DL. Predicting condom use among sexually experienced Latino adolescents. *Western J Nurs Res.* 2007; 29:724–38.
- [37]. Sugrue, M. *Science Says: Effective and Promising Teen Pregnancy Prevention Programs for Latino Youth.* National Campaign to Prevent Teen Pregnancy; Washington, DC: 2007.
- [38]. Perez W, Padilla AM. Cultural orientation across three generations of Hispanic adolescents. *Hispanic J Behav Sci.* 2000; 22:390–8.
- [39]. McDonald JA, et al. Reproductive health of the rapidly growing Hispanic population: Data from the Pregnancy Risk Assessment Monitoring System, 2002. *Matern Child Health J.* Jun 26.2007

Characteristics of the full Hispanic sample and Mexican-American, male, and female subsamples with significance testing between males and females, weighted National Longitudinal Survey of Youth 1997 – 2003

Table 1

	Full Hispanic sample (95% CI)	Mexican-American (95% CI)	Gender		Gender differences
			Male (95% CI)	Female (95% CI)	
	N = 1,614	N = 862	N = 827	N = 787	
<u>Outcome variables</u>					
Transition to sexual experience before age 18	65.9% (63.1 – 68.7)	62.7% (58.5 – 66.8)	69.5% (65.6 – 73.1)	61.9% (57.7 – 66.0)	*
Contraceptive use at first sex	72.6% (69.6–75.4)	68.8% (64.5–72.8)	72.9% (68.8–76.7)	72.1% (67.7–76.2)	
Condom use at first sex	60.8% (57.7 – 64.0)	57.7% (53.2 – 62.1)	57.5% (53.0 – 61.8)	64.7% (60.1 – 69.1)	*
Consistent contraceptive use at age 17	52.2% (47.5 – 56.8)	45.5% (38.9 – 52.2)	56.2% (49.9 – 62.4)	47.5% (40.7 – 54.3)	
Consistent condom use at age 17	44.9% (40.2 – 49.6)	43.1% (36.4 – 50.1)	54.5% (48.1 – 60.8)	34.4% (28.2 – 41.1)	***
Transition to a live birth before age 20	19.5% (17.1 – 22.3)	19.7% (16.5 – 23.2)	12.1% (9.5 – 15.3)	28.2% (24.8 – 32.8)	***
Multiple live births	8.5% (6.9 – 10.4)	13.0% (10.2 – 16.5)	5.2% (3.5 – 7.5)	12.3% (9.6 – 15.6)	***
<u>Immigration measures</u>					
Generation status					*
1st generation	14.9% (10.3 – 18.3)	16.5% (13.8 – 19.7)	13.9% (10.3 – 18.8)	16.1% (12.5 – 20.9)	
2nd generation	38.4% (33.9 – 43.3)	45.4% (41.2 – 49.6)	39.7% (32.7 – 46.6)	36.9% (30.7 – 44.3)	
3rd generation	46.7% (43.6 – 49.7)	38.1% (34.1 – 42.3)	46.4% (42.2 – 50.6)	47.0% (42.6 – 51.5)	
Language status					
Youth interview conducted in Spanish	3.9% (2.9 – 5.1)	6.4% (4.7 – 8.7)	3.6% (2.4 – 5.4)	4.1% (2.9 – 6.0)	
Parental interview conducted in Spanish	16.1% (14.1 – 18.2)	24.2% (21.0 – 27.8)	16.8% (14.1 – 19.9)	15.2% (12.6 – 18.2)	
Responding parent speaks a second language at home	46.6% (43.6 – 49.6)	47.8% (4.6 – 52.0)	47.7% (43.6 – 51.9)	45.3% (41.0 – 49.7)	
Youth and responding parent speak only English	33.5% (30.6 – 36.4)	21.6% (18.2 – 25.5)	31.9% (28.0 – 35.9)	35.3% (31.2 – 39.7)	
Country of origin					
Mexico	46.0% (43.1 – 49.0)	–	44.6% (40.6 – 48.7)	47.6% (43.3 – 51.9)	

	Full Hispanic sample (95% CI)	Mexican- American (95% CI)	Gender		Gender differences
			Male (95% CI)	Female (95% CI)	
	N = 1,614	N = 862	N = 827	N = 787	
Puerto Rico	9.3% (7.6 – 11.3)	–	9.8% (7.4 – 12.7)	8.8% (6.5 – 11.8)	
Cuba	4.1% (3.1 – 5.4)	–	5.3% (3.7 – 7.4)	2.8% (1.8 – 4.5)	
Central/South America	10.6% (8.3 – 13.6)	–	10.4% (7.3 – 14.6)	11.0% (7.8 – 15.5)	
Other	29.9% (26.4 – 33.8)	–	30.0% (25.5 – 35.4)	29.9% (25.1 – 35.6)	
<u>Covariates</u>					
Individual characteristics					
Male	53.1% (56.0 – 50.1)	51.5% (47.2 – 55.7)	–	–	
Age at baseline (12/31/1996)					
12	20.4% (18.1 – 22.9)	20.2% (17.1 – 23.7)	18.8% (15.9 – 21.1)	22.2% (18.8 – 26.1)	
13	20.8% (18.5 – 23.3)	21.0% (17.6 – 24.7)	19.2% (16.2 – 22.5)	22.6% (19.1 – 26.5)	
14	19.3% (17.0 – 21.8)	19.6% (16.5 – 23.1)	18.7% (15.7 – 22.2)	19.9% (16.7 – 23.7)	
15	20.8% (18.5 – 23.3)	21.5% (18.3 – 25.2)	22.6% (19.3 – 26.3)	18.7% (15.7 – 22.1)	
16	18.8% (16.4 – 21.3)	17.8% (14.7 – 21.3)	20.7% (17.4 – 24.5)	16.6% (13.5 – 20.2)	
Family/ household characteristics					
Family structure					
Two biological/adoptive parents	57.4% (54.4 – 60.3)	60.7% (56.4 – 64.8)	59.5% (55.4 – 63.4)	55.1% (50.7 – 59.4)	
Single biological/adoptive parent	32.0% (29.3 – 34.9)	30.5% (26.6 – 34.6)	30.8% (27.1 – 34.7)	33.4% (29.4 – 37.6)	
Biological parent and other parent	10.6% (8.9 – 12.6)	8.9% (6.7 – 11.7)	9.8% (7.6 – 12.4)	11.5% (9.0 – 14.7)	
Highest school grade completed by parent ^a					
Less than high school	31.1% (28.4 – 33.9)	48.2% (43.9 – 52.5)	30.8% (27.2 – 34.7)	31.3% (27.5 – 35.5)	
High school	30.2% (27.4 – 33.1)	26.0% (22.3 – 30.0)	29.1% (25.4 – 33.1)	31.3% (27.3 – 35.7)	
At least some college	38.8% (38.8 – 41.9)	25.9% (22.3 – 29.9)	40.1% (35.9 – 44.3)	37.4% (33.1 – 41.8)	
Respondent's mother had a live birth before age 20	29.7% (27.0 – 32.5)	34.3% (30.3 – 38.5)	29.3% (25.7 – 33.2)	30.1% (26.3 – 34.3)	
Average annual household income (in \$10,000) ^b	3.63 (3.4 – 3.8)	3.15 (2.9 – 3.4)	3.60 (3.3 – 3.9)	3.66 (3.3 – 4.0)	
Number of siblings					
0–1	33.5% (30.7 – 36.4)	25.7% (22.2 – 29.5)	33.5% (29.7 – 37.6)	33.5% (29.5 – 37.8)	

	Full Hispanic sample (95% CI)	Mexican-American (95% CI)	Gender		Gender differences
			Male (95% CI)	Female (95% CI)	
	N = 1,614	N = 862	N = 827	N = 787	
2	26.8% (24.2 – 29.6)	23.9% (20.4 – 27.8)	25.9% (22.4 – 29.7)	27.8% (24.0 – 32.0)	
3	17.6% (15.4 – 20.0)	21.3% (18.1 – 25.0)	19.2% (16.2 – 22.7)	15.7% (12.9 – 19.1)	
4+	22.1% (19.8 – 24.6)	29.1% (25.5 – 33.0)	21.4% (18.3 – 24.8)	23.0% (19.6 – 26.6)	
Rural	10.3% (8.6 – 12.3)	9.7% (7.5 – 12.5)	11.0% (8.7 – 13.9)	9.5% (7.1 – 12.5)	
Urban	87.4% (85.2 – 89.3)	86.7% (83.5 – 89.3)	86.6% (83.5 – 89.1)	88.3% (85.0 – 90.9)	
Unknown	2.3% (1.6 – 3.4)	3.6% (2.3 – 5.7)	2.4% (1.5 – 3.9)	2.2% (1.2 – 4.2)	
Census region					
Northeast	14.0% (12.2 – 16.2)	1.6% (.8 – 3.1)	14.3% (11.8 – 17.4)	13.7% (11.1 – 16.8)	
North Central	12.3% (10.3 – 14.7)	11.5% (8.8 – 14.8)	12.8% (10.1 – 16.2)	11.8% (8.9 – 15.5)	
South	30.3% (27.7 – 33.1)	27.5% (24.0 – 31.3)	32.3% (28.6 – 36.3)	28.0% (24.3 – 32.0)	
West	43.3% (40.4 – 46.3)	59.4% (55.2 – 63.5)	40.5% (36.5 – 44.6)	46.5% (42.2 – 50.9)	
Total	1,614	862	827	787	

* $p < .05$ *** $p < .001$.^aParental education measured for biological parent with higher level of education.^bMore than 5% of respondents had missing data on income (19%). In all analyses, for missing data we substituted the mean or mode of the nonmissing values. For these cases, we also included a flag variable to indicate missing data in the multivariate models.

Table 2

Proportions and 95% confidence intervals associated with immigration measures in relation to sexual experience before age 18, contraceptive and condom use at first sex, consistent contraceptive and condom use at age 17, live birth before age 20 and multiple live births among the full Hispanic sample, weighted, Natinal Longitudinal Survey of Youth, 1997-2003

	Transition to sexual intercourse before age 18 (95% CI)	Contraceptive use at first sex (95% CI)	Condom use at first sex (95% CI)	Consistent contraceptive use at age 17 (95% CI)	Consistent condom use at age 17 (95% CI)	Transition to a live birth before age 20 (95% CI)	Multiple live births (95% CI)
Generation status	N = 1,614	N = 1,375	N = 1,386	N = 662	N = 631	N = 1,386	N = 1,384
First generation	63.7% (63.7–63.7)	62.3% (54.4–69.5)	55.9% (48.2–63.4)	36.4% (26.1–48.1)	39.1% (27.9–51.5)	20.6% (20.6–20.6)	11.3% (7.4–17.1)
Second generation	67.9% (67.9–68.0)	71.3% (66.4–75.7)	60.0% (54.8–64.9)	47.2% (39.5–55.1)	44.2% (36.6–52.2)	20.2% (20.2–20.2)	8.8% (6.4–12.0)
Third generation	67.6% (67.6–67.6)	77.2% (72.9–81.1)	63.3% (58.5–67.9)	60.8% (54.1–67.2)	47.1% (40.4–53.9)	16.9% (16.9–16.9)	7.1 (4.9–10.4)
Significance ^a	**			***			
Language status							
Youth interview conducted in Spanish ^b	57.3% (57.2–57.3)	63.4% (47.1–77.1)	48.7% (33.5–64.2)	41.1% (31.9–51.0)	42.7% (32.8–53.1)	16.1% (16.1–16.1)	16.7% (7.8–32.2)
Parent interview conducted in Spanish	68.6% (68.6–68.6)	65.2% (57.9–71.8)	56.5% (49.2–63.6)	–	–	25.9% (25.8–25.9)	9.7% (6.1–15.0)
Responding parent speaks a second language at home	67.1% (67.1–67.1)	69.6% (65.0–73.8)	60.5% (55.9–65.0)	49.5% (42.6–56.4)	47.5% (40.7–54.4)	18.0% (18.0–18.0)	9.4% (7.1–12.4)
Youth and responding parent only speak English	67.5% (67.5–67.5)	80.9% (75.9–85.1)	64.5% (58.7–70.0)	61.2% (52.9–68.8)	42.7% (34.8–50.9)	16.9% (16.9–16.9)	5.7% (3.5–9.2)
Significance ^a	***			**			
Country of origin							
Mexico	63.9% (63.9–63.9)	68.8% (64.5–72.8)	57.7% (53.2–62.1)	45.5% (38.9–52.2)	43.1% (36.4–50.0)	23.5% (23.5–23.5)	13.0% (10.2–16.5)
Puerto Rico	74.0% (74.0–74.0)	72.8% (61.2–82.0)	64.1% (52.6–74.2)	55.7% (38.7–71.5)	50.2% (35.1–65.2)	13.3% (13.3–13.2)	3.0% (1.3–6.8)
Cuba	54.7% (54.6–54.7)	76.2% (60.0–87.3)	64.5% (47.8–78.3)	–	–	5.9% (5.9–6.0)	1.8% (.5–5.5)
Central/South America	69.4% (69.4–69.4)	69.0% (59.1–77.4)	63.2% (53.4–72.1)	–	–	16.0% (16.0–16.0)	8.1% (4.1–7.1)
Other ^c	70.8% (70.8–70.8)	78.9% (73.3–75.4)	63.3% (57.1–69.1)	57.2% (50.3–56.8)	45.4% (40.2–49.6)	15.9% (15.9–15.9)	4.2% (2.5–7.1)
Significance ^a					*		***
Total	67.1%	72.6%	60.8%	52.2%	44.9%	18.8%	8.5%

^a Chi-square statistics were calculated for each immigration measure overall for each outcome:

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

= $p < .001$
**
= $p < .01$
*
= $p < .05$.

^b Transition to sexual intercourse before age 18 and Transition to a live birth before age 20 are examined using life table techniques; other outcomes are examined using cross-tabulations. In Outcomes at age 17, we combined "Parental interview conducted in Spanish" with "Youth interview conducted in Spanish", due to small cell sizes.

^c "Other" country of origin includes: "Chicano", "other Hispanic", and "other Spanish" origins.

Table 3

Odds ratios and 95% confidence intervals associated with immigration factors in relation to transition to sexual intercourse before age 18, contraceptive and condom use at first sex, consistent contraceptive and condom use at age 17, live birth before age 20, and multiple live births^a, among the full Hispanic sample, weighted, National Longitudinal Survey of Youth 1997–2003

	Transition to sexual intercourse before age 18	Contraceptive use at first sex	Condom use at first sex	Consistent contraceptive use at age 17	Consistent condom use at age 17	Transition to a live birth before age 20	Multiple live births
Generation status							
First generation	.80 (.66–.98)*	.72 (.46–1.14)	1.04 (.68–1.58)	.32 (.17–.60)***	.65 (.32–1.31)	.96 (.61–1.51)	1.24 (.59–2.57)
Second generation	.94 (.80–1.10)	.95 (.65–1.39)	1.12 (.80–1.58)	.50 (.31–.80)**	.79 (.50–1.24)	1.12 (.76–1.66)	1.20 (.65–2.19)
Third generation	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Chi-square/ F statistic (DF) ^b	62.31 (16)***	2.91 (16)***	3.66 (16)***	2.10 (16)**	2.15 (16)**	112.41 (16)***	5.84 (16)***
Language status							
Youth interview conducted in Spanish ^c	.63 (.44–.91)*	.71 (.32–1.55)	.84 (.40–1.77)	.39 (.21–.73)**	.89 (.46–1.70)	.55 (.22–1.36)	1.44 (.46–4.53)
Parent interview conducted in Spanish	.87 (.70–1.08)	.80 (.47–1.34)	1.16 (.72–1.86)	–	–	.96 (.60–1.55)	.97 (.43–2.20)
Responding parent speaks a second language at home	.93 (.79–1.09)	.64 (.43–.94)*	.96 (.68–1.34)	.55 (.34–.87)*	1.12 (.70–1.77)	.91 (.62–1.34)	1.61 (.88–2.94)
Youth and responding parent only speak English	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Chi-square/ F statistic (DF) ^b	61.79 (16)***	2.94 (16)***	3.47 (16)***	1.94 (15)*	2.14 (15)**	107.77 (16)***	6.00 (16)***
Country of origin							
Mexico	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Puerto Rico	1.35* (1.02–1.79)	.85 (.42–1.71)	1.09 (.57–2.09)	1.25 (.53–2.99)	.96 (.43–2.15)	.73 (.32–1.66)	.18 (.06–.54)**
Cuba	0.86 (.57–1.30)	1.11 (.50–2.49)	1.21 (.59–2.47)	–	–	.34 (.10–1.19)	.14 (.04–.48)**
Central/South America	1.18 (.95–1.47)	.81 (.49–1.32)	1.11 (.68–1.81)	–	–	.81 (.47–1.40)	.57 (.23–1.39)
Other ^d	1.29 (1.08–1.55)**	1.12 (.73–1.71)	1.03 (.71–1.49)	1.48 (.94–2.34)	1.00 (.62–1.61)	.94 (.64–1.38)	.31 (.15–.64)**
Chi-square/ F statistic (DF) ^b	73.20 (17)***	2.64 (17)***	3.29 (17)***	1.53 (15)	2.17 (15)**	103.24 (17)***	6.03 (17)***
N =	1,614	1,375	1,386	662	631	1,384	1,386
Combined models							
Generation Status							

	Transition to sexual intercourse before age 18	Contraceptive use at first sex	Condom use at first sex	Consistent contraceptive use at age 17	Consistent condom use at age 17	Transition to a live birth before age 20	Multiple live births
First generation	.86 (.69–1.09)	.81 (.47–1.40)	.98 (.58–1.64)	.35 (.16–.73)**	.59 (.27–1.31)	1.17 (.70–1.94)	1.32 (.55–3.15)
Second generation	.97 (.80–1.17)	1.09 (.71–1.68)	1.09 (.74–1.60)	.56 (.34–.94)*	.73 (.44–1.23)	1.22 (.79–1.89)	1.15 (.58–2.29)
THird generation	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Language status							
Youth interview conducted in Spanish ^c	.75 (.50–1.13)	.88 (.36–2.15)	.88 (.38–2.05)	.76 (.36–1.58)	1.23 (.57–2.68)	.48 (.18–1.29)	.74 (.18–2.89)
Parent interview conducted in Spanish	.97 (.74–1.26)	.88 (.48–1.60)	1.16 (.66–2.03)	–	–	.86 (.49–1.51)	.62 (.23–1.65)
Responding parent speaks a second language at home	1.00 (.83–1.20)	.65 (.42–.99)*	.91 (.62–1.33)	.72 (.43–1.21)	1.29 (.77–2.18)	.86 (.56–1.32)	1.21 (.60–2.47)
Youth and responding parent speak only English	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Country of origin							
Mexico	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)
Puerto Rico	1.33 (1.00–1.77)	.93 (.46–1.86)	1.11 (.58–2.14)	1.47 (.60–3.56)	.94 (.41–2.14)	.69 (.29–1.64)	.15 (.05–.48)**
Cuba	.85 (.56–1.28)	1.10 (.49–2.48)	1.21 (.59–2.46)	–	–	.32 (.09–1.14)	.13 (.04–.49)**
Central/South America	1.22 (.96–1.53)	.88 (.53–1.47)	1.14 (.68–1.90)	–	–	.78 (.45–1.35)	.56 (.23–1.39)
Other ^d	1.26 (1.04–1.53)*	1.00 (.64–1.56)	1.00 (.67–1.50)	1.41 (.86–2.30)	1.06 (.65–1.73)	.89 (.59–1.36)	.33 (.16–.69)**
Chi-square/ F statistic (DF) ^b	84.52 (23)***	2.18 (23)***	2.65 (23)***	1.90 (20)**	1.74 (20)*	117.79 (23)***	4.68 (23)***
N =	1,614	1,375	1,386	662	631	1,384	1,386

^a All models include all covariates listed in Table 1.

 $p < .001$.

**
 $p < .01$.

*
 $p < .5$.

^b Transition to sexual experience before age 18 and 9/15/2008Transition to a live birth before age 20 are run in event history models; other outcomes are run in logistic regression models. Chi-square statistics and associated p values are reported for event history models and F-statistics and associated p values are reported for logistic regression models.

^c In models predicting outcomes at age 17, we combined "Parent interview conducted in Spanish" with "Youth interview conducted in Spanish", due to small cell sizes.

^d In models predicting outcomes at age 17, we combined Cuba, and Central/South America with the "Other" category due to small cell sizes.

Statistically significant odds ratios and 95% confidence intervals associated with the interaction of gender with generation and country of origin.a among the full Hispanic sample, weighted, National Longitudinal Survey of Youth 1997–2003

Table 4

	Transition to sexual intercourse before age 18	Contraceptive consistency at age 17	Condom consistency at age 17
Interaction of gender and generation			
Male × first generation (vs. third generation)		2.94* (1.25–6.91)	
Second generation females		.28*** (.15–.53)	
Second generation males		0.82 (.44–1.50)	
Male × first generation (vs. third generation)			.24* (.07–.86)
First generation females			1.42 (.59–3.43)
First generation males			.35* (.13–.90)
Interaction of gender and country of origin			
Male Other country of origin (vs. Mexico)	.68* (.50–.94)		
Other country of origin: females	1.60** (1.25–2.04)		
Other country of origin: males	1.09 (.87–1.37)		

^a All models include all covariates listed in Table 1.

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.