A Comparison of Hispanic and White Adolescent Females' Use of Family Planning Services in California

CONTEXT: *In California, the adolescent birthrate among Hispanics is three times that among whites. Because Hispanics are projected to make up one-half of the state's adolescents by 2020, it is important to determine how cultural and health policy–relevant factors are linked to this group's use of family planning services.*

METHODS: *Data from the 2001 California Health Interview Survey were used to examine characteristics of Hispanic and white females aged 14–17, including patterns of use of family planning services in the past year. Multivariate logistic regression analyses were conducted to assess the association between selected characteristics and use of family planning services.*

RESULTS: *Compared with white adolescents, Hispanic adolescents came from poorer families, had a poorer health status, less commonly had a regular source of primary health care and had lower rates of alcohol and drug use, and of sexual experience. Although the proportion of sexually experienced Hispanics who had used family planning services was similar to that of whites (34% and 27%, respectively), the proportion who had ever been pregnant and used such services was significantly larger (42% vs. 9%). In the multivariate analysis, Hispanic adolescents who had ever been pregnant were significantly more likely than whites who had not to have used family planning services in the past year (odds ratio, 11.6).*

CONCLUSIONS: *A need exists for family planning programs to target Hispanic adolescents before they become pregnant, and to send a clear message that contraceptive services are available and should be used before a woman ever has a pregnancy.*

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Adolescent pregnancy is associated with negative social and economic outcomes for both the mother and the child,[1] and it is a persistent problem among Hispanics in California. Hispanic adolescents have a birthrate that is three times that of whites (83 vs. 25 births per 1,000).[2] And while the overall adolescent birthrate in the state has decreased during the past decade, the rate of decrease among Hispanics has been lower than that among whites. Because the proportion of California's adolescent population who are Hispanics is projected to be 50% by 2020,[3] it is imperative to understand the unique factors underlying this group's health—including reproductive health—status.

The main factors associated with differences between Hispanic and white adolescents' pregnancy rates include Hispanic teenagers' slightly higher rates of sexual activity and lower levels of contraceptive and condom use.[4] In addition, Hispanic adolescents lack access to health care,[5] and this may hinder their access to reproductive health information, use of prescription methods of contraception and referral to family planning services. Poverty and lack of health insurance are known to hinder Hispanics' access to and use of health care services.[6] Parental immigration status may also be a factor: Hispanic children of immigrant parents are more likely than Hispanic children of U.S.-born parents to lack health insurance and access to health care services.[7] However, the relationship between parental immigration status and use of reproductive health care services among Hispanic adolescents has so far not been examined in the literature.

Therefore, the goal of our study was to analyze data from Hispanic and white adolescents in order to identify Hispanics' unique characteristics associated with the use of family planning services. We also examined health policy–relevant factors that we expected to be associated with use of family planning services, including having at least one parent without legal immigration status, having health insurance and having a regular source of primary health care. By comparing Hispanic and white adolescents, we can identify potential cultural factors that may impede adolescents' use of family planning services. We hypothesize that because of cultural norms within Hispanic families, which often forbid adolescents from having sexual intercourse before marriage, Hispanic adolescents are less likely than white adolescents to use family planning services before pregnancy. In contrast, we hypothesize that Hispanic adolescents will be as likely as whites to use such services after pregnancy, because after a Hispanic teenager has been pregnant, her family may be less likely to object to the use of family planning services for the prevention of future pregnancies.

TABLE 1. Percentage distribution of females aged 14–17, by selected characteristics, according to race or ethnicity, 2001 California Health Interview Survey

Characteristic	White (N=1,156)	Hispanic (N=473)
HOUSEHOLD		
Language spoken at home		
English	97.4	48.4***
Spanish	u	51.6
Health insurance plan		
None	5.1	27.3***
Medi-Cal or Healthy Families	8.7	28.3***
Employer-based	81.6	41.5***
Other (e.g., self-purchased)	4.7	u
% of federal poverty level		
0–99	6.6	39.6***
100–199	11.1	32.0***
200–299	17.1	12.5
≥300	65.3	16.0***
Residence		
Urban	86.9	93.5***
Rural	13.1	6.5
PARENT		
Citizenship/immigration status		
Both parents are citizens/have green card	99.2	71.6***
≥one parent is a noncitizen/has no green card	u	28.4
Marital status		
Married	74.2	75.7
Single	25.8	24.3
Education		
<high school	4.2	52.4***
High school	21.0	22.3
≥some college	74.6	25.3***
ADOLESCENT		
Citizenship/immigration status		
U.S.-born citizen	97.1	68.3***
Naturalized citizen	u	6.4
Noncitizen with green card	u	10.0
Noncitizen without green card	u	15.3
Proficiency in spoken English		
Good/very good	99.1	92.1***
None/not good	u	7.9
Currently attends school		
Yes	97.7	98.1
No	2.3	1.9
General health status		
Good/excellent	92.2	79.2***
Poor/fair	7.8	20.8***
Has regular source of primary health care		
Yes	92.5	82.3***
No	7.5	17.7
Substance use†		
Ever smoked cigarettes regularly	9.7	u
Ever had alcoholic drink	44.0	36.7*
Ever tried drugs (e.g., marijuana, cocaine)	24.3	15.7**
Ever had sex		
Yes	21.0	13.9*
No	79.0	86.1
Total	100.0	100.0

*p<.05. **p<.01. ***p<.001. †Percentages do not total 100 because categories are not mutually exclusive. *Notes:* Percentages are weighted and may not total 100 because of rounding; Ns are unweighted. u=unavailable, because unweighted cell size was less than five, the coefficient of variation was 30% or larger, or data were missing.

METHODS

Data

We analyzed data from the 2001 California Health Interview Survey (CHIS)[8]—a random-digit dial telephone survey of 55,000 households drawn from every county in California, which was conducted between November 2000 and September 2001. The sample was representative of the state's noninstitutionalized population living in households. The CHIS interviewed one adult from each household, as well as one adolescent aged 12–17, if present. (Adults were asked to identify adolescents of whom they were the parent or guardian, and one adolescent per household was randomly selected to participate.) The adolescent interviews were conducted in six languages (including English and Spanish), and lasted an average of 19 minutes; adult interviews lasted 32 minutes. The overall household response rate was 38%, which was comparable to that of other 30-minute telephone surveys conducted in California in multiple languages. A full description of the methods is available from the Web site of the Center for Health Policy Research of the University of California at Los Angeles.[9]

Among the 5,801 adolescents interviewed, 60% were white and 34% were Hispanic (8% of the Hispanic adolescents were interviewed in Spanish); 49% of respondents were female. Data were weighted according to the 2000 census, so that the sample was representative of California's noninstitutionalized adolescent population. In our study, we selected the subset of 1,629 Hispanic and white adolescent females aged 14–17, who represented 760,000 such individuals in California. (Adolescents younger than 14 were not selected because the CHIS did not ask this age-group about their sexual behavior.)

Parents were asked socioeconomic and demographic questions about their household, themselves and the adolescent; the adolescent was asked about his or her health status, health-related behavior and use of health care and family planning services.

Variables

• *Socioeconomic and demographic characteristics.* Parents provided the following information: whether English or Spanish was the primary language spoken at home; the family's type of health insurance; the household income (which we converted to the percentage of the federal poverty level); whether their residence was urban or rural; their citizenship or immigration status, marital status and educational level; the adolescent's age, citizenship or immigration status, and proficiency in spoken English; and whether the adolescent was attending school.

• *Adolescents' health.* The adolescents were asked about their general health status, regular source of primary health care and history of substance use; they were also asked whether they had ever had sexual intercourse. Sexually experienced respondents were asked how much their parents knew about their sexual activity, as well as whether they had ever been pregnant, received family planning counseling or services in the past year, had sex before age 14, used a con-

TABLE 2. Percentage distribution of sexually experienced females aged 14–17, by selected characteristics, according to race or ethnicity

Characteristic	White (N=277)	Hispanic (N=68)
Parents' knowledge of adolescent's sexual activity		
A lot	53.4	61.6
None/a little	46.6	38.4
Ever been pregnant		
Yes	8.3	18.3†
No	91.7	81.7
Used family planning services in past year‡		
Yes	27.0	33.5
No	73.0	66.5
Ever been pregnant and used family planning services in past year		
Yes	9.3	42.4**
No	90.7	57.6
Total	100.0	100.0

**p<.01. †Because the coefficient of variation was 37%, this estimate may not be stable. ‡Data for fewer than 0.5% of respondents were missing. *Notes:* Percentages are weighted; Ns are unweighted. Distributions of adolescents by whether they had first had sex before age 14, used a contraceptive at first and most recent intercourse, and ever had a sexually transmitted disease are not reported because the unweighted cell sizes for Hispanics were small and coefficients of variation were 30–48%.

traceptive the first and the most recent time they had sex, and ever had a sexually transmitted disease.

Statistical Analyses

We determined the precision of all estimates by calculating coefficients of variation (the standard deviation divided by the mean); estimates with coefficients of variation of 30% or larger were considered unstable. We used chi-square tests to conduct pairwise comparisons of proportions of adolescents categorized by their characteristics. We also conducted multivariate logistic regressions to examine the association between selected characteristics and sexually experienced adolescents' use of family planning services in the past year. We focused on variables that had potential implications for health policy, including composite variables combining race or ethnicity with parental citizenship or immigration status, and with pregnancy history.

Because CHIS has a stratified sampling design, SUDAAN 8.0 was used for the statistical analyses. This software allowed us to account for the effect of the sampling design on the variance of the regression parameter estimates. Normalized weights were included in the regression analyses.

RESULTS

The samples of white and Hispanic adolescent females shared several characteristics: The majority lived in an urban area, were born in the United States or had legal residence status, spoke English well, were currently attending school and had parents who were married (Table 1). Significantly larger proportions of white households than of Hispanic households used English as the main language, had employer-based health insurance and had an income of at least 300% of the federal poverty level. On the other hand, larger proportions of Hispanic households than of white households had no insurance or public insurance, had an income of less than 200% of the federal poverty level and were located in urban areas. Furthermore, compared with whites, Hispanics less commonly had two parents who were U.S. citizens or had a green card, had less educated parents, less commonly were U.S.-born citizens, spoke English less proficiently, rated their health status lower and less commonly had a regular source of health care. However, they had lower rates of experience with alcohol, drugs and sexual intercourse than whites.

We limited our analysis of reproductive health status and use of family planning services to adolescent females who had ever had sex (Table 2). Distributions of whites by parents' level of knowledge about the adolescent's sexual activity and by history of pregnancy were similar to those of Hispanics. The rate of use of family planning counseling or services during the previous year among Hispanics was also similar to that among whites (34% and 27%, respectively). However, the proportion of adolescents who had ever been pregnant and also used family planning services in the previous year was significantly larger among Hispanics than among whites (42% vs. 9%).

The first multivariate logistic regression analysis focused on the following health policy–relevant variables: age, race or ethnicity, parental citizenship or immigration status, language spoken at home, health insurance status, poverty status, parental education and the regular source of primary health care (Table 3, page 160). None of these variables were significantly associated with adolescents' use of family planning services within the past year.

The second multivariate analysis excluded parental citizenship or immigration status but included pregnancy history. Hispanic adolescents who had ever been pregnant were significantly more likely than whites who had never been pregnant to have used family planning services in the previous year (odds ratio, 11.6), although the wide confidence interval reflects the relatively small sample of Hispanic teenagers.

DISCUSSION

Although only one-quarter of sexually experienced white adolescent females and one-third of Hispanic counterparts had received family planning services in the past year, Hispanics who had ever been pregnant had an increased likelihood of using family planning services. Therefore, it appears that the main problem to be addressed in increasing levels of use of reproductive health care services among Hispanic adolescents in California is how to encourage this group to use such services as a preventive measure before pregnancy. Implementing information campaigns at schools or community-based organizations may be one way of doing this.

Our hypotheses that parental immigration status and having a regular source of care are associated with Hispanic adolescents' use of family planning services were not sup-

TABLE 3. Odds ratios (and 95% confidence intervals) from logistic regression analyses assessing the association between selected variables and adolescents' use of family planning services in the past year

Variable	Model 1	Model 2
Age		
14–16 (ref)	1.0	1.0
17	1.4 (0.7–3.0)	1.4 (0.2–2.9)
Race/ethnicity x parental citizenship/immigration status		
White, one parent is a citizen (ref)	1.0	na
Hispanic, one parent is a citizen/ has green card	1.1 (0.4–2.9)	na
Hispanic, ≥one parent is a noncitizen/ has no green card	3.1 (0.4–21.8)	na
Race/ethnicity x pregnancy history		
White, never pregnant (ref)	na	1.0
White, ever pregnant	na	1.3 (0.4–4.1)
Hispanic, never pregnant	na	0.9 (0.3–2.8)
Hispanic, ever pregnant	na	11.6 (1.8–76.3)**
Language spoken at home		
English (ref)	1.0	1.0
Spanish	1.3 (0.3–5.3)	1.7 (0.4–6.6)
Health insurance status		
Uninsured (ref)	1.0	1.0
Insured	4.5 (0.6–34.9)	3.1 (0.7–14.6)
% of federal poverty level		
0–99 (ref)	1.0	1.0
100–199	1.5 (0.4–6.0)	1.6 (0.4–6.2)
200–299	1.8 (0.4–7.2)	1.8 (0.4–7.5)
≥300	1.2 (0.3–4.5)	1.3 (0.3–4.9)
Parental education		
<high school (ref)	1.0	1.0
High school	0.6 (0.2–2.2)	1.0 (0.3–3.7)
≥some college	1.1 (0.3–3.8)	1.6 (0.4–6.4)
Regular source of primary health care		
None (ref)	1.0	1.0
Doctor's office/health maintenance organization	1.2 (0.4–3.8)	1.2 (0.4–3.9)
Clinic/health center	1.3 (0.4–4.5)	1.3 (0.4–4.3)
Emergency room/other	0.7 (0.0–9.0)	0.6 (0.0–10.0)

**p<0.01. *Notes:* ref=reference category. na=not applicable.

ported by our findings. In addition, health insurance status and family income (in terms of federal poverty level), which typically predict access to and use of health care services, were not associated with use of family planning services in our sample. A possible explanation is that in California, the Family PACT (Planning, Access, Care and Treatment) program provides family planning services regardless of health insurance status or the ability to pay.

Hispanic adolescents in our study had a somewhat lower rate of sexual experience than did whites. In contrast, other researchers have found a slightly higher rate of sexual experience among Hispanic adolescents than among whites.[10] However, these researchers included adolescents aged 15–19, whereas we focused on 14–17-year-olds.

Parental knowledge of adolescents' sexual activity did not vary by race or ethnicity in our sample. This result was surprising, because a previous study on unmarried Hispanics in the United States found that a pervasive sexual silence existed, especially among women, and that more than half of respondents reported that their mothers had never spoken to them about sex when they were younger.[11] Still, parental attitudes toward adolescents' sexual behavior are likely to differ between whites and Hispanics: Sexual activity among unmarried young persons is considered culturally unacceptable among Hispanics and even harmful to the reputation of young females. Therefore, messages that Hispanic adolescents receive about sexuality from their parents, especially from their mothers, may focus more on abstinence than on pregnancy prevention. These messages may deter nonpregnant Hispanic adolescents from seeking family planning services, because this would imply that they are sexually active. Our survey did not measure parental attitudes toward adolescents' sexual activity, and future research needs to focus on this area, as well as on the communication between parents and adolescents about sexual matters.

The sampling procedures used by CHIS are designed to obtain a representative sample of adolescents in California. Our study included all Hispanic and white adolescent females aged 14–17 in the CHIS sample. The sampling procedures used are the strength of our study. Nevertheless, there are some limitations. First, our data were cross-sectional and did not allow the temporal sequence or causality to be established. Second, both the cross-sectional nature of the analysis and the relatively small sample of young adolescents who had ever had sex (especially in the Hispanic sample) limited our ability to make comparisons between Hispanic and white adolescents, and to examine all factors relevant to reproductive health status, including sexual history before age 14, contraceptive use and history of sexually transmitted diseases. Third, all of our data are based on self-reports and therefore are subject to reporting bias, especially considering the sensitive nature of the questions on sexual behavior and the young age of the sample. (However, a previous study indicates that adolescents can accurately report their sexual behavior.[12]) Fourth, CHIS did not survey adolescents on abortion history. Adolescents who had ever had an abortion may have underreported past pregnancies. Finally, because CHIS used telephone interviews, it may not have adequately sampled Hispanic adolescents living in an unstable environment without a telephone in their home (e.g., those who are poor or whose parents lack U.S. citizenship or legal immigration status).

Further research focusing on Hispanic adolescents' reproductive health is needed—in particular, studies with large samples exploring differences in contraceptive use and examining Hispanic adolescents' attitudes toward the most effective methods of contraception, including the pill and other hormonal methods. Studies that use qualitative methods to explore Hispanic adolescents' barriers to the use of family planning services before pregnancy are especially needed.

In conclusion, our findings point to a need for family planning programs to target Hispanic adolescents and to send a clear message that contraceptive services are available and should be used before a woman ever becomes pregnant.

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