

## Having Children with Multiple Partners Is Associated With Women's Perception of Lower Social Support

Women who have had children with multiple partners are less likely than others to feel supported by their family and friends, according to analyses of data on mothers of an urban U.S. cohort of children.<sup>1</sup> Multipartnered fertility was negatively associated with women's belief that if they needed it, someone would give them money or a place to live, or help them with child care. The association appears to be bidirectional, with multipartnered fertility affecting perceived support, and vice versa.

The analyses were based on three waves of survey data from the Fragile Families and Child Wellbeing study—a longitudinal study of an urban U.S. cohort of nearly 5,000 children born between 1998 and 2000. Participating mothers were asked at baseline, and again in one- and three-year follow-up surveys, about their social and demographic characteristics, their and their partners' child-bearing with other partners, and their perceived level of social support. Three types of support were examined: whether women believed that if they were in need, someone would loan them \$200, provide them with a place to live or help them with babysitting or child care. The researchers pooled all three waves of data, and they excluded records from mothers who did not respond to a follow-up survey and records that were missing data; the final sample consisted of 12,259 records. Logistic regression analyses were conducted to examine the independent relationships between social and demographic characteristics, multipartnered fertility and perceived support.

On average, mothers were 28 years old and had had two children. Forty-one percent were black, 28% were white and 25% were Hispanic; half had had some postsecondary education. Nineteen percent of mothers were immigrants, 6% reported being in poor health and 49% had lived with both parents at age 15. About one-third (30%) of mothers and one-third (33%) of fathers had had children with a prior partner. Overall, mothers' perceived level of support was high; the

vast majority believed that someone would loan them money (88%), provide them with a place to live (88%) or help them with child care (91%) if they needed it. Of mother-father couples, half were married and 19% were cohabiting; 11% rarely or never talked.

In logistic regression analyses controlling only for parity, mother's and father's multipartnered fertility were negatively associated with perceiving all three types of support (odds ratio, 0.7 each); increased parity was associated with reduced odds of perceiving social support as well (0.8). When social and demographic variables were added to the model, the associations for mother's and father's multipartnered fertility weakened (0.8 and 0.7), but remained significant. Most of the social and demographic variables were significant: Having a high school diploma or some college, being white or Hispanic and having lived with both parents at age 15 were positively associated with perceived support (1.2–1.9), whereas being an immigrant and being in poor health were negatively associated with the outcome (0.5 and 0.6, respectively). Finally, when variables pertaining to the relationship between the mother and the father were added to the model, the associations for mother's and father's multipartnered fertility were further reduced (0.9 and 0.8), but remained significant. Three of the four relationship variables were significantly associated with perceived support: being married or cohabiting (1.4 each) and being estranged (0.7). All social and demographic variables that were significant in the second model remained so in the third.

The researchers conducted separate analyses by type of perceived support, controlling for social, demographic and relationship characteristics. A mother's multipartnered fertility was negatively associated with her belief that someone would loan her money or would help her with child care (odds ratio, 0.8 each); a father's multipartnered fertility was negatively associated with a woman's perception of all three types of support (0.7–0.8).

To investigate the causal direction of the association between multipartnered fertility and perceived support, the researchers first conducted analyses among mothers who reported perceiving all three types of support at the one-year follow-up. At the three-year follow-up, 7% had had a child with another partner, and 16% perceived less support than they had earlier; of the mothers who experienced new multipartnered fertility between surveys, a disproportionate share (25%) reported a decrease in perceived support. In multivariate analyses, women who experienced new multipartnered fertility between surveys were less likely than those who did not to perceive support (odds ratio, 0.7). Then, researchers conducted analyses among mothers who reported no multipartnered fertility at the one-year follow-up. At the three-year follow-up, 8% had had a child with another partner; of mothers who did not perceive support at the one-year follow-up, a disproportionate share (14%) had experienced multipartnered fertility between surveys. In multivariate analyses, women who had perceived all three types of support at the one-year survey were less likely than those who had not to have experienced multipartnered fertility between surveys (odds ratio, 0.6). The evidence suggests a bidirectional relationship, in which multipartnered fertility reduces the availability of support and the availability of support inhibits multipartnered fertility.

The authors acknowledge that a limitation of their analyses was that they relied on women's perceived level of support, which may have been different than the true amount of support available to women. Nevertheless, the authors comment that “as a result of multipartnered fertility, children may be losing access to valuable resources from social networks.” They add that because multipartnered fertility occurs disproportionately among blacks and unmarried individuals, “a loss of perceived support resulting from multipartnered fertility may contribute to

racial inequality and to inequality across family structures.”—*J. Rosenberg*

**REFERENCE**

1. Harknett K and Knab J, More kin, less support: multipartnered fertility and perceived support among mothers, *Journal of Marriage and Family*, 2007, 69(1):237–253.

## A Fourth of U.S. Women Aged 14–59 Have a Human Papillomavirus Infection

Twenty-seven percent of U.S. females aged 14–59 are infected with at least one type of human papillomavirus (HPV); 15% are positive for high-risk types, which can cause cervical, genital or anal cancer, and 18% for low-risk types, according to a survey conducted in 2003–2004.<sup>1</sup> Among all age-groups, the highest prevalence of HPV infection—45%—is among 20–24-year-olds. HPV infection is associated with being aged 20–24, being unmarried, having had three or more lifetime sexual partners and having had any partners in the last year.

To provide an estimate of HPV prevalence among females before 2006, when the Food and Drug Administration (FDA) approved an HPV vaccine against four types (two high-risk and two low-risk), researchers analyzed data from 1,921 females who participated in the 2003–2004 National Health and Nutrition Examination Survey, which uses a nationally representative sample of noninstitutionalized U.S. women aged 14–59. Self-collected cervicovaginal samples taken at a mobile examination center were tested for HPV DNA, and data were collected on participants' demographic characteristics, as well as sexual history. The weighted prevalence of HPV types was compared using the McNemar test, and associations between the presence of any HPV and personal characteristics were assessed using the Wald chi-square test and multivariate logistic regression analysis (which was limited to women aged 18–59).

Twenty-seven percent of surveyed females tested positive for HPV; using 2000 census data, the researchers calculate that this represents nearly 25 million infected individuals. The highest rate of infection was among 20–24-year-olds, 45% of whom were infected; prevalence was 20% among those aged 50–59 and 25–28% among other age-groups. Prevalence increased with each year

between the ages of 14 and 24. Among sexually active females, 49% of those aged 20–24 were infected, as were 40% of those aged 14–19; rates were lower for women 25 or older. Overall, 39% of blacks tested positive, as did 24% of whites and Mexican Americans. HPV prevalence differed depending on marital status: 46% among those who lived with a partner; 41% among those who were widowed, divorced or separated; 31% among those who had never married; and 17% among those who were married. Prevalence decreased from 35% among females who had not graduated from high school to 25% among those with any postsecondary education. Thirty-eight percent of those living below the poverty index tested positive, as did 24% of those at or above the index.

Fifteen percent of all surveyed females were infected with a high-risk HPV type, and 18% were infected with a low-risk type; rates of both types were highest among those aged 20–24. Infection with high-risk types decreased after age 29, and infection with low-risk types leveled off after age 39. The HPV types that can be prevented by the FDA-approved vaccine were found in 0.1–1.5% of females; overall, 3.4% tested positive for at least one of these types. Sixty percent of females who had any HPV infection had only one type of the virus, 24% had two and 16% had three or more.

Multivariate logistic regression analysis of data on women aged 18–59 found a number of factors to be independently associated with HPV infection. Women aged 20–24 were more likely than those 30 or older to be infected (odds ratio, 2.2). Marital status was a significant predictor of infection: Compared with married women, those who were formerly married, never-married or living with a partner had higher odds of being infected (3.1, 2.2 and 3.4, respectively). Furthermore, women who had had three or more lifetime sexual partners had higher odds of being infected than those with a single lifetime partner (2.7), and compared with women who had had no partners in the last year, those who had had one, two, or three or more sexual partners in the last year had elevated odds (2.1, 4.0 and 4.1, respectively).

The researchers note several limitations of their study. Women who declined to participate were more likely than respondents to be of “other” race or ethnicity, to be younger than 40, to have been born outside the United States or Mexico, and to have never had sex. Also, cervicovaginal samples may

not detect the same HPV types as cervical mucosa samples collected in other studies, and prevalence rates determined by DNA tests underestimate the cumulative incidence of HPV because these tests do not indicate past exposure. Nonetheless, the researchers state that this is the first study to provide a national estimate over a broad age range, and they believe that its findings will be useful in assessing “the wide-scale impact of the vaccine for reducing infection and could help guide models evaluating impact and cost-effectiveness.”—*J. Thomas*

### REFERENCE

1. Dunne EF et al., Prevalence of HPV infection among females in the United States, *Journal of the American Medical Association*, 2007, 297(8):813–819.

## **Infants' Low Birth Weight Is Linked to Low-Income Mothers' Chronic Stress**

Low-income women who suffer from chronic psychosocial stress are at increased risk of having a low-birth-weight baby, according to findings from a study of Illinois welfare recipients.<sup>1</sup> Overall, 13% of women who gave birth during the course of the study delivered a low-birth-weight infant, but the proportion was significantly elevated among those who reported a variety of stressors. For example, it was 31% among those who had difficulty affording food for their household and 34% among those who had poor skills for coping with external stressors. Multivariate analyses confirmed that these and other stressors were independently associated with the likelihood of having a low-birth-weight baby.

The sample was derived from a cohort of women participating in a longitudinal study of the maternal and child health effects of making the transition from welfare to work. Members of the larger cohort had been randomly selected from among families in nine counties who received Temporary Assistance for Needy Families in 1998; participants were interviewed annually from 1999 to 2004. To examine associations between psychosocial stress and low birth weight (defined as less than 2,500 g), researchers identified women in the cohort who had singleton births during the first four years of the study and analyzed data collected within six months of delivery.

Of the 294 women who made up the analytic sample, 77% were black, 16% were white, 5% were Hispanic and the rest were members of other racial or ethnic groups. The women ranged in age from 19 to 47; two-thirds were 26 or younger. Among women who reported their household income, the mean income was \$13,416. Thirteen percent of women had low-birth-weight infants; these women were significantly older than others (28 vs. 25 years, on average), but the groups did not differ with respect to any other demographic characteristics examined (race or ethnicity, education, parity, marital status and recent gap in health insurance).

In univariate analyses, the proportion of women whose infants were low-birth-weight was significantly related to five of 16 psychosocial stressors studied. It was 17% among unemployed women, 23% among those living in crowded housing, 27% among those who had a child with a chronic illness, 31% among those who had difficulty paying for the household's food and 34% among those with poor coping skills. Among women not reporting these stressors, by contrast, only 6–12% had low-birth-weight babies.

Except for home crowdedness, each of these stressors remained significantly associated with a woman's likelihood of having a low-birth-weight baby in analyses controlling for maternal age. Odds ratios ranged from 2.6 (for food insecurity) to 4.0 (for poor coping skills).

The researchers note that the finding of a positive relationship between maternal age and the frequency of low birth weight contradicts earlier findings for the general population. By way of explanation, they suggest that maternal age is a "proxy" for chronic stressors that are difficult to measure and that the relationship is evidence of the "cumulative adverse effects of chronic psychosocial stress" among low-income women. A better understanding of the association between chronic stress and low birth weight, they conclude, "may allow the development of more effective risk assessment measures or even interventions that could mitigate the damaging effects of the stress response" in low-income women.—*D. Hollander*

## REFERENCE

1. Borders AEB et al., Chronic stress and low birth weight neonates in a low-income population of women, *Obstetrics & Gynecology*, 2007, 109(2, part 1):331–338.

## Ovarian Cancer Protection from Oral Contraceptives Is Greatest with the Lowest Doses of Hormones

Oral contraceptive use has a well-established association with a reduced risk of ovarian cancer; new evidence from a population-based case-control study suggests that pills with the lowest hormonal content offer the greatest protection.<sup>1</sup> The odds of ovarian cancer were reduced by up to 80% among pill users, depending on the oral contraceptive formulation. Furthermore, the lower the dose of one particular progestin, the lower the risk of ovarian cancer. If all women had used some type of birth control pill, an estimated four in 10 malignancies might have been avoided; if all had used low-dose pills, that proportion would have been almost three-quarters.

Using data from two rapid-response systems, researchers identified residents of Hawaii and Los Angeles aged 18 and older in whom ovarian cancer was diagnosed between 1993 and 2005; they obtained information about tumor stage, grade and histology from pathology and surgical reports. A control group of women aged 18 and older with no history of ovarian cancer was randomly selected from among respondents to an annual household survey in Hawaii and by random digit dialing in Los Angeles. Participants completed interviews covering demographic, socioeconomic, health-related and contraceptive information; interviewers used monthly calendars and pictures of various oral contraceptives to help women provide detailed information about their reproductive history and pill use.

The analyses included 745 women with cancer and 943 controls. In both groups, women were, on average, about 56 years old; the vast majority were Asian or white. Women with cancer had had significantly less education and fewer pregnancies than controls, and were more likely to have a family history of ovarian cancer. They were significantly less likely to have been sterilized, to be premenopausal and to be using combined hormone therapy.

A total of 868 women (317 women with cancer and 551 controls) had ever used combination oral contraceptives and provided the information necessary for the researchers to determine the potency (low vs. high) of each hormonal component. Forty percent of ever-users had taken pills

with a low concentration of estrogen (0.035 mg or less of ethinyl estradiol), and 10% had taken pills with a low concentration of progestin (less than 0.3 mg of norgestrel). These women had used oral contraceptives more recently than those who had used higher potency formulations, but they had used the pill for longer durations.

In analyses controlling for a wide range of potentially confounding variables, ever-use of oral contraceptives was associated with significantly reduced odds of ovarian cancer (odds ratios, 0.5 overall; 0.6 in analyses adjusted for duration of use). Associations were significant for women who had taken pills with high doses of both hormones (0.6), low doses of both (0.2), or a low dose of estrogen combined with a high dose of progestin (0.5); differences among pill formulations were not statistically significant. The researchers estimate that use of any combined oral contraceptive might have averted 42% of ovarian cancers and that use of pills with low doses of estrogen and progestin might have prevented 73% of malignancies.

A similar pattern was observed in analyses restricted to women with invasive ovarian cancer. Compared with women who had never used the pill, ever-users had 46% lower odds of invasive cancer; significant reductions were found regardless of pill formulation. Both the overall results and those for invasive cancer were essentially the same for women younger than 55 (the only ones exposed solely to low-dose pills) as for the entire cohort.

A final set of analyses examined the ovarian cancer risk in relation to ever-use of monophasic pills containing the progestin norethindrone. These calculations showed a significantly reduced risk of disease associated with use of any such oral contraceptive (odds ratio, 0.6). The risk was dramatically lower among women who had used pills with 0.4–0.5 mg of norethindrone (0.1) than among those whose pills had contained 10 mg of the progestin; it decreased significantly as the dose of norethindrone declined.

The researchers acknowledge a number of shortcomings of their study, including the possibility of nonresponse bias and reliance

on participants' recall. However, they also point to some distinctive strengths—particularly, that the cohort included enough women providing detailed information about pill use to permit important subgroup analyses. Noting that declines in ovarian cancer rates in the United States are partly attributable to oral contraceptive use, the researchers conclude that studies involving

larger numbers of women are needed so that the association between low-dose pill use and ovarian risk can be better understood.

—*D. Hollander*

**REFERENCE**

1. Lurie G et al., Association of estrogen and progestin potency of oral contraceptives with ovarian carcinoma risk, *Obstetrics & Gynecology*, 2007, 109(3):597–607.

## Teenage Parents' Educational Attainment Is Affected More by Available Resources than by Parenthood

For teenage parents, the availability of material resources has a greater effect on educational attainment than parenthood, according to an analysis of data from the 1988–2000 waves of the National Education Longitudinal Study (NELS).<sup>1</sup> Overall, by age 26, those who became parents as teenagers had 11.9 years of education; those who did not had 13.9 years. However, having access to resources can diminish the two-year “educational penalty” paid by teenage parents—for teenage fathers, living with one’s parents and working less than half-time can narrow the gap, and for teenage mothers, having child care resources is most important.

Research has shown that teenage parents have poorer educational outcomes than their childless peers, but the focus has been on the resources available to teenagers before they became parents. In the NELS analysis, the researcher explored the effect on educational attainment by age 26 of the material resources available to teenagers after they became parents. In addition, and in contrast to most research, the analyst examined both women and men who had been teenage parents, hypothesizing that if resources limit educational attainment, they should do so for both genders.

The NELS, using a clustered, stratified national probability sample of nearly 25,000 U.S. eighth graders enrolled in public and private schools in 1988, gathered school- and individual-level information on education, employment and other aspects of life. Follow-up surveys were conducted two, four, six and 12 years after the baseline for both students and dropouts; most respondents were 26 at the time of the 2000 follow-up. All respondents who participated in all waves of the survey, who took the math and reading tests given by the NELS in 1988 and

whose parents completed questionnaires in 1988 and 1992 were included in the analytic sample. The final sample comprised 8,432 respondents, 356 (4%) of whom had become teenage parents by 1992, when most respondents were graduating from high school. Bivariate analyses were used to examine the differences between these young adults and their peers who remained childless through 1992; linear regression models estimated the effects of resources, parenthood status, and demographic and educational characteristics on the respondents’ educational attainment.

The vast majority of respondents who became parents as teenagers, but a significantly smaller proportion of their peers who did not, were female—86% vs. 48%. Higher proportions of those who had been teenage parents than of other participants were black, Latino and Native American; lower proportions were white and Asian. Compared with respondents who did not have children during adolescence, those who did had been socially, economically and educationally disadvantaged by eighth grade in 1988—they had lived in communities where higher proportions of students participated in school lunch programs; they had had lower family socioeconomic status and educational aspirations; a lower proportion had lived with two parents; and higher proportions had had behavioral problems and had been left back in school. In 1992, a lower proportion of respondents who became teenage parents than of those who did not had lived with two parents; higher proportions of the former than of the latter had lived with neither parent and worked 20 or more hours a week. By 2000, the respondents who had not had children as teenagers had had, on average, 13.9 years of education; those who had been

teenage parents had attained an average of 11.9 years of education.

Analyses controlling for baseline demographic and educational factors indicated that teenage mothers paid a penalty of 0.78 fewer years of educational attainment; the penalty for teenage fathers was 0.66 years. In this model, having had behavioral problems in school, having been left back and, for males, having lived in a socioeconomically disadvantaged community were associated with educational penalties. Parents’ socioeconomic status, NELS test scores and educational aspirations were associated with educational gains.

When employment, marital and residential status in 1992 were added, the educational disadvantage of teenage parenthood lost significance for men. For women, the penalty was reduced to 0.53 years. The penalties and gains associated with the baseline factors remained essentially the same. For both genders, working more than half-time was associated with educational penalties. For men, having lived with one or both parents in 1992 was associated with educational gains; for women, having lived with both parents was associated with a gain. Having been married in 1992 was associated with an educational penalty of 0.37 years for women.

In a model accounting for teenage parents’ caregiver status, women who were teenage mothers and were the primary caregiver for their child attained 0.64 fewer years of education than respondents who were not parents. Compared with their peers who were not parents during adolescence, teenage fathers who were not the primary caregiver attained 0.62 fewer years of education. Interestingly, in this model, there were no educational penalties for parenthood for teenage fathers who were the primary caregiver or for teenage mothers who were not compared with those who had not become parents during adolescence.

To examine the relative importance of parenthood status and material resources, the analyst estimated educational attainment for eight hypothetical students (two teenage fathers, two teenage mothers, two childless males, two childless females), assuming that one person in each pair was resource-rich (defined as unmarried, living with two parents and working less than half-time) and the other was resource-poor (married, living with neither parent and working at least half-time).



All of the hypothetical teenage parents, regardless of level of resources, attained 0.2–0.5 fewer years of education than their childless counterparts. However, and most strikingly, resources proved to be more important to educational attainment than teenage parenting. Regardless of parenthood status, the resource-rich teenagers attained 1.1–1.7 more years of education than those who were resource-poor.

The researcher concludes that the educational disadvantage seen among teenage parents begins before they become parents. Teenage parents are further disadvantaged because children create a need for resources

beyond what is usually available to teenagers. The researcher suggests that the findings should “offer a message of hope” to policymakers. Teenage parents, she concludes, do not have to suffer long-term educational consequences. Rather, “provided with enough material resources, contemporary teenage parents may be able to go quite far in school, despite their initial socioeconomic and educational disadvantage.”—*L. Melhado*

#### REFERENCE

1. Mollborn S, Making the best of a bad situation: material resources and teenage parenthood, *Journal of Marriage and Family*, 2007, 69(1):92–104.

## Delinquent Youths' Risky Behavior Presents Public Health Challenge for Their Communities

Patterns of risky behavior among youth who pass through the juvenile justice system may persist for years, keeping these young men and women at high risk of acquiring, and transmitting, STDs.<sup>1</sup> In a study of youth who spent time in a Chicago detention center in the late 1990s, 54% of males and 69% of females who had had unprotected vaginal sex shortly before being detained said in a follow-up interview about three years later that they had recently had unprotected vaginal sex; 75% of males and 58% of females who reported at baseline that they had had unprotected sex while drunk or high gave a similar report at follow-up. In addition, substantial proportions of young people adopted risky behaviors in the years after their detention.

To examine the prevalence, development and persistence of behaviors that increase STD risk among delinquent youth, researchers collected information from a stratified random sample of 10–18-year-olds who entered the short-term detention center between early 1997 and mid-1998. Baseline data were gathered in face-to-face interviews, generally conducted within two days after participants entered the facility. Follow-up interviews were conducted in person or by telephone, depending on where participants lived, an average of three years later. At each interview, participants were asked about a wide range of behaviors related to sexual activity and the use of injection drugs and other substances.

The analyses are based on the 316 females and 408 males who provided information on risk behaviors at follow-up. Slightly more than half of the participants were black, and the rest were almost evenly divided between Hispanic and white youth. At follow-up, 66% of participants were living in the community, and 5% lived in communities more than two hours away; the rest were in correctional facilities (26%) or residential placement facilities (3%).

At baseline, nine in 10 male participants were sexually active, and six in 10 had had more than one partner in the previous three months. Ninety percent had had vaginal sex, 43% oral sex and 10% anal sex. Two-thirds said they had had sex while drunk or high, and more than one-third had had unprotected sex in these circumstances. Marijuana use was common, and 60% of males had smoked marijuana more than three times in the past month. Analyses using an adjusted Wald F statistic indicate that the proportions of men reporting several risky behaviors were significantly higher at follow-up than at baseline: oral sex (59% vs. 43%), anal sex (22% vs. 10%), sex while drunk or high (80% vs. 66%) and unprotected sex while drunk or high (55% vs. 36%). By contrast, the proportions reporting that they had had multiple partners during the previous three months and had smoked marijuana in the past month declined between interviews. Men who were incarcerated at follow-up had a significantly lower prevalence of several risk behaviors than did those living in

the community; however, they were more likely to report anal sex with a high-risk partner (15% vs. 2%).

Eighty-seven percent of women were sexually active when they entered detention, and 27% had recently had multiple partners. Vaginal sex was far more common than oral or anal sex (reported by 84%, 32% and 8%, respectively). Substantial proportions of females reported recent episodes of unprotected sex, and nine in 10 reported alcohol or marijuana use. Significantly higher proportions at follow-up than at baseline reported recent unprotected vaginal sex (62% vs. 51%) or oral sex (36% vs. 24%), unprotected sex while drunk or high (46% vs. 35%), and trading sex for drugs (8% vs. 3%). Reports of multiple partners, alcohol use and marijuana use were less common at follow-up than at the time of detention. A number of behaviors were more prevalent among women in the community than among incarcerated women at follow-up. Notably, virtually all of the former and three-quarters of the latter were sexually active; 65% and 23%, respectively, had recently had unprotected vaginal sex.

Among both males and females, a certain proportion of participants who did not report a given behavior at baseline reported it in the follow-up interview. For some behaviors, this proportion was small—for example, fewer than 1% of males who had not had receptive anal sex before detention had done so by follow-up, and fewer than 1% of females who had not had anal sex with a high-risk partner at baseline had done so by their second interview. For others, it was substantial. In particular, among participants who had not reported these behaviors at baseline, 39% of males and 55% of females reported recent unprotected vaginal sex at follow-up, and 23% and 30% reported recent unprotected oral sex; 66% and 44% said at follow-up that they had had sex while drunk or high, and 44% and 39% reported having done so without using protection.

By and large, risky behavior that was present at baseline persisted throughout the study period. Four in 10 males and two in 10 females who had had more than one partner shortly before detention had also had multiple partners shortly before follow-up, and levels of persistence were even higher for several other behaviors. Among both men and women, more than half of

those who initially reported recent unprotected vaginal sex (54% and 69%, respectively) or unprotected oral sex (59% and 55%) reported the same behaviors at follow-up. Eighty-eight percent of males and 72% of women who said at baseline that they had had sex while drunk or high said the same thing at follow-up; 75% of males and 58% who had had unprotected sex while drunk or high before entering detention had also done so before their second interview.

Results of logistic regression analyses revealed few racial and ethnic differences in patterns of risky behavior, but several significant differences by gender. At follow-up, males were considerably less likely than females to report use of injection drugs (odds ratio, 0.1), but were more likely to report a range of other behaviors, including having had more than one recent partner (6.7), more than three recent partners (11.1) and a high-risk partner for anal sex (10.7). Similarly, at follow-up, men were less likely than women to report having begun injecting drugs (0.1) or using substances other than alcohol or marijuana (0.4); they were more likely to report having begun to engage in a number of sexual behaviors, including multiple partners, vaginal sex with a high-risk partner and anal sex (2.1–8.0). And the likelihood that two risky behaviors—having had more than one partner in the past three months and having had sex while drunk or high—persisted throughout the period was greater among males than among females (5.0 and 4.7, respectively).

Although the researchers acknowledge that the study has several limitations stemming from the nature of the sample and the measures used, they conclude that it yields important lessons. “Because most detained youth return to their communities,” they write, “[STD] risk behaviors in delinquent youth are a community public health problem, not just a problem for the juvenile justice system.” Coordinating interventions designed for delinquent youth presents “the opportunity to redress significant health disparities and threats to public health.”—*D. Hollander*

linquent youth: implications for health care in the community, *Pediatrics*, 2007, 119(5):e1126–e1141, <[www.pediatrics.org/cgi/doi/10.1542/peds.2006-0128](http://www.pediatrics.org/cgi/doi/10.1542/peds.2006-0128)>, accessed May 1, 2007.

**REFERENCE**

1. Romero EG et al. A longitudinal study of the prevalence, development, and persistence of HIV/sexually transmitted infection risk behaviors in de-

## Partners' Reports of Sexual Activity, but Not of Risky Behavior, Generally Agree

Women and their partners enrolled in a clinical trial of an intervention aimed at preventing heterosexual transmission of HIV and other STDs generally gave the same responses when asked whether they had recently engaged in a variety of sexual behaviors and whether they had used condoms; responses were more discordant when participants were asked about risky behavior.<sup>1</sup> Roughly one in three couples disagreed as to whether each partner had used drugs and whether each had used alcohol while having sex. The duration of the relationship and partners' satisfaction with the relationship were key predictors of discordant reports of sexual and risk-related behaviors.

Researchers recruited women attending an urban, outpatient clinic to participate in the study, and asked eligible women to recruit their main partner. To be eligible, women had to have had unprotected vaginal or anal sex in the past 90 days with a man they believed was HIV-positive, was using injection drugs, had had STD symptoms or received an STD diagnosis within the past 90 days, or had had another partner during that period. The 217 women who enrolled were interviewed in private by female staff, and their partners were interviewed in private by male staff; couples were then randomized to one of three study arms. The researchers analyzed baseline data to assess concordance of partners' reports of sexual behavior and examine characteristics associated with discordance.

The majority of both women and men were older than 35 (54% and 62%, respectively), were black or Hispanic (94% and 93%), had never been married (60% and 55%), had an income of less than \$5,000 (68% and 51%) and had not finished high school (66% and 65%). About seven in 10 participants of each gender were HIV-negative, but one in 10 did not know their HIV status. Sixty percent of women and 40% of men scored low on a scale measuring sexual

comfort; 56% and 48%, respectively, scored low on a scale assessing relationship satisfaction. One-quarter of each reported that they had been in their current relationship for at least six years; nine in 10 felt confident that they and their partner would still be together in a year.

Partners generally gave matching reports about their sexual activity in the past 90 days. In all couples, both partners said that they had had vaginal intercourse; in the majority, reports of anal and oral sex were concordant (i.e., both partners said either that the activity had occurred or that it had not). However, 19% of couples gave discordant reports about anal sex, 24% about fellatio and 26% about cunnilingus. Levels of concordance in reporting of preventive behavior were high; only 5% of couples disagreed as to whether they had used a female condom, and 15% about whether they had used a male condom. Discordance was more common in reports of risky behavior: When asked whether each partner had used drugs and whether each had used alcohol during sexual activity in the past 90 days, 32–34% of couples gave discordant responses.

Using logistic regression, the researchers identified the individual and relationship characteristics that were associated with discordant reports of sexual and risk-related behaviors. Couples in which the woman was formerly married had significantly higher odds of providing discordant reports of cunnilingus than did those in which the woman was never-married (odds ratio, 3.3); couples in which the woman was married had sharply reduced odds of disagreeing on the female partner's drug use or the male partner's alcohol use during sex (0.2–0.3). The likelihood of discordant reporting of the male's alcohol use was higher if the man was aged 26–35 than if he was older, and disagreement about fellatio and cunnilingus was more common if the male was Hispanic than if he was black (3.4 and 6.9, respectively). Compared with couples who included an HIV-negative male, those in which the man was HIV-infected were more likely to provide discordant reports about fellatio (5.9), any condom use (8.5) and male condom use (9.4).

Both partners' satisfaction with the relationship was associated with discordant reporting of behavior. The odds of disagreement about fellatio, the woman's drug use during sex and the man's drinking during sex

were elevated if the female partner scored low on the relationship satisfaction scale (odds ratios, 2.0–3.0); the odds of discordance about both partners' use of drugs during sex were reduced if the male scored low on this measure (0.3–0.5). Relationship duration also was important: Couples who had been together for six or more years were more likely than those in shorter term relationships to give discordant responses when asked about cunnilingus and each partner's use of drugs during sex (2.3–2.6).

Noting that the study design and sample limit the generalizability of the findings, the researchers nevertheless believe that the study's lessons are substantial. For example, it points up the importance of routine assessment of substance use during sexual behavior, underscores the need for interventions to help women negotiate condom use and demonstrates the necessity of understanding the interplay between relationship satisfaction and risky behavior. Identifying factors "that could assist in determining

which couples would be more likely to make discordant reports" about their risk-related behaviors, the researchers conclude, would help in the development of further research on interventions targeted at specific populations.—*D. Hollander*

#### REFERENCE

1. Witte SS et al., Predictors of discordant reports of sexual and HIV/sexually transmitted infection risk behaviors among heterosexual couples, *Sexually Transmitted Diseases*, 2007, 34(5):302–308.