Teenagers and Hispanic Women Know Less About Contraception Than Young Adults and Whites

The great majority of teenage and young adult women participating in a national survey reported having heard of most contraceptive methods, but levels of detailed knowledge varied, and analyses revealed disparities both by age and by race or ethnicity.[1] For example, while virtually all respondents knew of the pill and nine in 10 knew that pill users can switch brands to alleviate side effects, only one in four were aware that a woman does not have to have a pelvic exam before obtaining pills. Hispanic women and teenagers exhibited lower levels of knowledge than whites and women in their 20s, respectively, and foreign-born Hispanics were less knowledgeable than their U.S.-born counterparts. Differences between black women and whites were few and were less pronounced than those between Hispanics and whites.

In an effort to improve understanding of well-documented racial, ethnic and age disparities in unintended pregnancy rates, investigators explored disparities in contraceptive knowledge and attitudes as reported by the 897 female respondents to the 2009 National Survey of Reproductive and Contraceptive Knowledge. The phone survey asked participants if they had ever heard of 12 contraceptive methods and probed knowledge about particular methods using about two dozen true-false questions; it also included questions on respondents' self-perceived contraceptive knowledge, attitudes likely to affect contraceptive use and background characteristics. Racial, ethnic and age differences were assessed in bivariable and multivariable analyses.

One-quarter of women were 18 or 19 years old, and the rest were in their 20s; nine in 10 had at least a high school education. Sixty percent were white, 20% black and 14% Hispanic; 6% belonged to other racial or ethnic groups. Ten percent overall, and 35% of Hispanics, were foreign-born. Eighty-five percent were sexually experienced, 79% had been sexually active in the last year and 30% were mothers. The majority had some form of insurance; white women were more likely to be covered by a private plan, and less likely to be enrolled in a public program, than black and Hispanic respondents.

Nearly all women (98–99%) had heard of the pill and the male condom; 87–95% knew of male sterilization, the IUD, the injectable, the ring, the patch, female barrier methods and emergency contraception. However, only 73% were aware of female sterilization, 67% natural family planning and 52% the implant. The proportions answering specific knowledge questions correctly ranged widely. For example, the great majority knew that women can switch pill types if they have side effects (86%), that condoms have an expiration date (95%) and that a condom can be used only once (98%). However, only 22% were aware that IUDs are not likely to cause infertility, and 25% that women do not need to have a pelvic exam before obtaining the pill.

The proportions of respondents who said that they knew a lot or everything about methods and their use ranged from 7% for the IUD to 67% for condoms. Sixty-nine percent of women believed that they had all the information they needed to avoid unintended pregnancy, and 61% said that decisions about birth control are mainly a woman's responsibility. The contraceptive features most frequently considered important were effectiveness in preventing pregnancy and STDs (88% and 79%, respectively); the ones cited least often were low cost (45%) and being hormone-free (37%).

Analyses controlling for age, educational attainment and sexual activity revealed relatively few racial and ethnic differences in contraceptive knowledge and attitudes. While knowledge was generally similar between black women and white women, the former were less likely than the latter to have heard of male sterilization or the ring, and to say that they knew a lot or everything about the pill (odds ratios, 0.3–0.4). Blacks were more likely than whites to consider themselves knowledgeable about the injectable and to believe that contraceptive decision making is women's responsibility (2.2–3.2); they had elevated odds of answering some method-specific questions correctly, but reduced odds of giving the correct response to others.

Hispanic women were less aware than whites of male sterilization, the IUD, the ring, the patch and natural family planning (0.1–0.5). They were less likely than white women to give correct answers to four questions probing detailed knowledge (0.2–0.4), but were more likely than whites to know that petroleum jelly should not be used with condoms (2.0). They also had elevated odds of considering birth control decisions a woman's responsibility (2.1) and saying that it is important for contraceptives to be hormone-free (2.0). Among Hispanics, foreign-born women were less likely than those born in the United States to know of the IUD, the ring and female barrier methods (0.1–0.2); they were more likely to give incorrect responses to several items examining specific knowledge and considered themselves less knowledgeable about the injectable, pill and condom.

In analyses controlling for race or ethnicity, education and sexual activity, the investigators found quite a few differences in knowledge and attitudes between 18–19-year-olds and women in their 20s. Teenagers were less likely than young adults to know of female sterilization, the implant, the IUD or natural family planning (odds ratios, 0.5–0.6), but more likely to have heard of the patch (3.2). They were less likely than the older group to give correct answers to five questions measuring specific knowledge (0.4–0.6), but were more likely to know that getting the pill does not require a pelvic exam (2.0). Women aged 18–19 had reduced odds of believing that they knew a lot or everything about the IUD, the pill and the condom (0.2–0.4), and of reporting that they had all the information they needed to avoid becoming pregnant unintentionally (0.5).

The authors note that their sample was relatively small and that the numbers of women in racial or ethnic groups other than white, black or Hispanic were too small for analysis. They

also acknowledge that they did not assess differences in knowledge by socioeconomic status, which is associated with contraceptive use and unintended pregnancy. Nevertheless, they write, their findings suggest that "clinicians should be aware that some patients, particularly Hispanic and teenaged patients, may have low knowledge about contraceptive options, and they should be prepared to provide necessary education."—*D. Hollander*

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Sexual Minority Teenage Males' Risk Profile Varies By Identity and Behavior

Teenage males who belong to a sexual minority group, as defined by measures combining sexual identity and behavior, have elevated odds of not having used condoms at last sex and ever having been forced to have sex; the picture is even more complex for those who consider themselves bisexual.[1] In analyses of Youth Risk Behavior Survey (YRBS) data from 2005–2007, bisexual adolescents' risk profile also featured a relatively young age at first sex and high number of partners, as well as an elevated likelihood of reporting that they had recently had concurrent partners or experienced intimate partner violence.

To study behaviors and experiences related to STD risk among teenage males, researchers pooled data from eight jurisdictions in which the YRBS, a school-based data collection effort, includes questions about sexual orientation. Their analytic sample consisted of 13,174 youth aged 12–18 who had had at least one sexual partner and provided data on all relevant measures. They combined responses to questions about sexual identity and the gender of sexual partners to categorize participants as heterosexual men who have sex only with women, heterosexual men who have sex with men (including those who also have sex with women), bisexual men or gay men. (Initial analyses showed no variation among bisexual or gay men by partners' gender, so these groups were not disaggregated.) Differences between men who have sex only with women, who made up 94% of the sample, and the other groups were examined in bivariate and logistic regression analyses.

Close to half of respondents were white, and about one-quarter each were black and Hispanic; on average, they were 16 years old at the time of the survey. Participants reported a mean age of 14 at first sex and a mean of 2.5 sexual partners. Some 17% had had concurrent partners during the past 90 days, 25% had not used a condom at last sex and 18% had used drugs or alcohol at that time. Eight percent had ever been forced to have sex, and 14% had been hit or slapped by a partner in the past 12 months.

In bivariate analyses, gay teenagers and heterosexual men who have sex with men were distinguished from heterosexual men reporting exclusively female partners by their greater reporting of nonuse of condoms at last sex and of having been forced to have sex. By contrast, the prevalence of all risky behaviors except substance use at last sex was higher among bisexual men than among the reference group; bisexual men also had an elevated likelihood of reporting forced sex.

Results of analyses controlling for race, ethnicity and age bear out the bivariate findings. Compared with heterosexual teenagers who have sex only with women, gay teenagers and heterosexual respondents who have sex with men had a greater likelihood of reporting nonuse of condoms (odds ratios, 3.6 and 2.1, respectively) and any history of forced sex (4.6 and 4.7). Bisexual youth had elevated odds of saying they had recently had concurrent partners (2.6), they had not used a condom at last sex (3.4), they had ever been forced into sex (4.8) and they had experienced intimate partner violence in the last year (2.6). They also reported an earlier age at first sex and a greater number of partners than heterosexual respondents who have sex only with women (incidence rate ratios, 0.9 and 1.4, respectively).

The researchers note that the survey did not define sexual behavior for participants, lacked information on the timing of events and on several measures that may affect the associations they detected, and included only youth who were enrolled in school. Despite these limitations, they write, the findings "provide compelling evidence that sexual health disparities emerge early in the life course and that risk factors are not evenly distributed across the sexual minority population." They encourage future work to further explore disparities in adolescents' STD risk, using measures of both sexual identity and sexual behavior.—*D. Hollander*

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Use of Social Media Shows Promise as Approach To Supplementing Contraceptive Counseling

Women who received one-on-one contraceptive counseling and then obtained supplementary information from a specially designed Facebook page scored higher on contraceptive knowledge, and registered larger gains in knowledge, than a group who received the same supplementary information from a patient education pamphlet.[1] These and other findings from an exploratory study conducted at a hospital-based obstetrics and gynecology clinic in New York City suggest that social media may be effective adjuncts to clinical contraceptive counseling.

Researchers recruited 18–45-year-old women visiting the clinic for gynecologic or postpartum care to participate in the study. A total of 143 women enrolled and were randomly assigned to either receive individual counseling from a provider and then have 30 minutes to review a patient education pamphlet or receive the same counseling and then have 30 minutes to explore a Facebook page created for the study. The Facebook page contained the same information as the pamphlet, but presented it in video, diagram and game formats. Before receiving counseling, women completed a contraceptive knowledge assessment and answered a survey covering their demographic characteristics and contraceptive use. After the intervention, they completed the same contraceptive knowledge assessment and answered questions about their contraceptive preferences and their satisfaction with the counseling they had received. Investigators used a variety of statistical tests to compare outcomes across intervention groups.

Overall, 34% of participants were 18–25 years old, 26% were 26–30 years old, 28% were 31–35 and 13% were 36–45. About

four in 10 were Hispanic, a similar proportion were black and most of the rest were white. Three-quarters were single, and three in five had been pregnant. The majority were currently using a contraceptive—43% a hormonal method (excluding implants), 35% a barrier, 8% an IUD and 1% sterilization. Women in the pamphlet group differed from those in the Facebook group only in their greater use of barrier methods (43% vs. 26%).

In the preintervention survey, women in the pamphlet group scored slightly higher than those in the Facebook group on contraceptive knowledge (medians, 7 and 6, respectively, on a scale of 1–25); in comparisons stratified by age-group, a similar difference was apparent only among 18–25-year-olds. After the intervention, however, women who had viewed the Facebook page scored higher than those who had reviewed the pamphlet (15 vs. 12), and a significant difference was seen in every age-group. Similarly, the median percentage increase in the knowledge score was higher in the Facebook group than in the pamphlet group both for the sample as a whole (36% vs. 12%) and for each age-group.

Overall and in every age-group, women who had received their postcounseling information from the Facebook page gave their satisfaction with counseling a score of 10 out of 10. For those who had read the pamphlet, by contrast, the median was 6 for the sample overall and 5–6 among the various age-groups.

After the intervention, a larger proportion of women in the pamphlet group than of those in the Facebook group expressed a preference for hormonal contraceptives (46% vs. 26%). By contrast, a preference for long-acting reversible contraceptive methods (implants and IUDs) was more common in the Facebook group than in the pamphlet group (57% vs. 35%), reflecting a difference in preference for implants (35% vs. 9%). Among women who were using barrier methods or no method, preference for implants also was greater in the Facebook group than in the pamphlet group after the intervention (26% vs. 5%); no other differences in contraceptive preference were found among these participants.

Emphasizing the exploratory nature of their study, the researchers remark that the results are "encouraging" but must be interpreted carefully. They note, among other limitations, that the study did not measure long-term retention of knowledge or actual contraceptive use, that the sample was small and that women's comfort in using Facebook (which may have affected their willingness to participate) was not assessed. Despite these limitations, they write, their "promising findings…should prompt future research into social media as a method for increasing contraceptive knowledge among women." —*D. Hollander*

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Antiretroviral Therapy Is Key to Preventing Sexual HIV Transmission

Over time, the cumulative risk that an HIV-negative individual with an HIV-positive partner will become infected through sexual activity can be high, and the best approach for averting this outcome is to use multiple preventive methods, according to calculations based on the most current available data on transmission rates and risk ratios from recent clinical trials.[1] Use of antiretroviral therapy by the infected partner appears to be the most effective single strategy for preventing HIV transmission in serodiscordant couples, and when it is part of a multipronged risk reduction approach, the long-term risk of transmission may be dramatically reduced.

Using results of published reports, analysts estimated the one-year and 10-year risks of HIV transmission through sexual activity within both male couples and male-female couples in which only one partner is infected. Their model considered a variety of sexual acts (insertive and receptive vaginal sex, and insertive and receptive anal sex) and protective strategies (consistent condom use, preexposure prophylaxis, circumcision of an uninfected male partner, use of antiretroviral therapy by an infected partner and avoidance of specific risky behaviors). It assumed that couples have sex six times per month and engage in different combinations of sexual acts.

For male couples having anal sex and using no preventive measures, according to the model, the estimated cumulative probability of transmission within one year is 52%; within 10 years, 99.9%. The 10-year risk is little changed if the HIV-negative partner is protected only by circumcision, abstention from receptive anal sex or preexposure prophylaxis; even consistent condom use alone leaves a considerable probability of transmission (76%). However, the infected partner's use of antiretroviral therapy lowers the 10-year risk to 25%, and combining this strategy with any one of the others brings the risk down even further—to as little as 6% with consistent condom use. If male serodiscordant couples use the complete range of preventive measures included in the model, the 10-year risk of transmission is 1%.

In couples consisting of an infected woman and an uninfected man who engage only in vaginal sex and use no protective strategies, the cumulative probability that the male will acquire HIV is 6% at one year and 44% at 10 years. If the woman uses antiretroviral therapy, the 10-year risk of transmission drops to 2%; use of any other single preventive strategy leaves the risk at 11–23%. Combining antiretroviral therapy use with consistent use of condoms, preexposure prophylaxis and circumcision yields a 10-year risk of 0.1%. Anal sex in couples made up of an HIV-positive woman and an HIV-negative man is associated with greater risk than vaginal sex—12% at one year and 71% at 10 years in the absence of preventive measures. At 10 years, the risk is 5% if the woman uses antiretroviral therapy and 22–43% if another protective approach is used alone.

If serodiscordant male-female couples in which the male is HIV-positive use no protection and engage only in vaginal sex, they have the same transmission risk as those in which the female is infected (6% at one year and 44% at 10 years); if they engage in anal sex, the risk increases to 20% at one year and 89% at 10 years. For those having only vaginal sex, consistent condom use or preexposure prophylaxis alone lowers the 10-year risk to 11–15%, and antiretroviral therapy alone reduces it to 2%. The combination of antiretroviral therapy and consistent condom use, with or without preexposure prophylaxis, results in a 10-year risk of 0.5%.

Sensitivity analyses suggested that the risk of HIV transmission is closely linked to the frequency with which serodiscordant couples have sex and to adherence to preexposure prophylaxis regimens. Furthermore, in scenarios assuming use of antiretroviral therapy, varying other assumptions of the models produced relatively little change in risk estimates.

The model, the analysts write, was intended not "to predict actual transmission risk for real-world serodiscordant couples," but to illustrate how cumulative risk mounts over time and relative effects of different approaches to risk reduction. They add that interpretation of the results is subject to a number of limitations—for instance, the model does not account for the possibility that fluctuations in viral load could affect transmission, that the risk of sexual transmission in serodiscordant couples levels off over time or that antiretroviral therapy is not equally effective for preventing transmission through anal and vaginal sex. Nevertheless, the researchers conclude, "individuals in serodiscordant relationships need to understand how best to minimize the risk of HIV transmission," and long-range cumulative transmission probabilities offer a greater insight into that risk than probabilities based on single sexual acts.—*D. Hollander*

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Risky Sex Fairly Rare Among U.S. Adults Being Treated for HIV

Most U.S. adults who were receiving outpatient care for HIV infection in 2009 were not engaging in unprotected vaginal or anal sex, but of the 12% who were doing so with a partner who was HIV-negative or whose infection status was unknown, half had viral loads high enough to suggest a risk of transmission.[1] Individuals who had achieved viral suppression—i.e., in whom the virus was undetectable or was at a low enough volume to indicate that it was not replicating—were less likely than others to report having sex, having unprotected sex and having unprotected sex with a partner who was not infected or whose infection status was unknown.

To study sexual behavior among HIV-infected adults, researchers analyzed data from the Medical Monitoring Project, which conducts annual cross-sectional surveys and medical record review to collect information on men and women aged 18 and older receiving outpatient HIV-related medical care. Weighted data from the project are representative of all U.S. adults receiving such care. The analyses included 4,094 individuals who received services at one of 461 participating facilities in the first four months of 2009, and who had received their HIV diagnosis at least 12 months earlier. Chi-square tests were used to assess differences in characteristics and past-year behaviors among three groups: 1,897 men who have sex with men (regardless of whether they also have female partners), 1,016 men who have sex only with women and 1,093 women who have sex with men (regardless of whether they also have female partners). (The sample also included transgender individuals and women who have sex only with women, but their numbers were too small to permit separate analyses.) Logistic regression was used to identify associations between viral suppression and various measures of sexual behavior.

Overall, three-quarters of participants were aged 40 or older; half were high school graduates. Some 41% were black, 35% white, 19% Hispanic and the rest members of other racial or ethnic groups. In the 12 months preceding the survey, 44% had incomes at or below the poverty level, 9% had been homeless and 6% had spent time in jail; 72% had had continuous health insurance coverage. Eight in 10 had received their HIV diagnosis at least five years earlier, and two-thirds had AIDS. In the past year, nine in 10 had been prescribed antiretroviral therapy, and six in 10 had been virally suppressed at every assessment. The three groups of participants as defined by sexual partnerships differed on most background and clinical characteristics. For example, men who have sex with men were the least likely to be black or poor, and the most likely to be high school graduates; women who have sex with men were less likely than men who have sex with men to have been virally suppressed throughout the last year, and men who have sex only with women were the most likely to have AIDS.

Some 62% of participants had had oral, anal or vaginal sex in the last year—38% with one partner and 24% with two or more. During the past year, 13% had had an STD, and 56% had not been tested. Some 27% had used noninjection drugs, and 4% had had transactional sex; 24% had consumed alcohol and 11% had used drugs before or during sex. The prevalence of all of these experiences differed across participant groups. Men who have sex with men were the most likely to have had multiple partners (39% vs. 8–13%), to have used noninjection drugs (35% vs. 17–24%), and to have used alcohol (32% vs. 15–19%) or drugs (16% vs. 7% in both of the other groups) before or during sex; they were more likely than men who have sex only with women to have had an STD (16% vs. 6%). Men who have sex only with women were the most likely not to have had an STD test (68% vs. 52–53%), and were more likely than women who have sex with men to have had transactional sex (5% vs. 2%). Women who have sex with men were more likely than men who have sex with men to report no sex partners in the past year (46% vs. 31%) and were more likely than men who have sex with women to have had an STD (12% vs. 6%).

HIV-infected individuals who had achieved viral suppression were less likely than those who had not to engage in vaginal or anal sex (prevalence ratio, 0.9), unprotected vaginal or anal sex (0.9), or unprotected vaginal or anal sex with a partner who was HIV-negative or whose HIV status was unknown (0.8). The results were similar for men who have sex with men. However, among men who have sex only with women, viral suppression was not associated with any of the behaviors examined, and for women who have sex with men, it was associated only with a reduced prevalence of vaginal or anal sex. Further analysis revealed that men and women who were not prescribed antiretroviral therapy were more likely than others to have engaged in each of the sexual behaviors studied.

The analysts estimate that 408,902 U.S. adults had received an HIV diagnosis at least one year ago and were receiving care. An estimated 56% of these men and women had had sex in the past year, 24% unprotected sex and 12% sex with a partner who was HIV-negative or whose HIV status was unknown. Roughly half of individuals participating in each of these behaviors were not virally suppressed.

The researchers observe that "individuals who were not virally suppressed, and therefore at…greatest risk of transmitting HIV, were also more likely to engage in sexual behaviours that have the potential to transmit HIV." However, they point out that the study was not designed to establish causal associations and that interpretation of the results is subject to several limitations. These include a lack of generalizability to individuals who do not know that they are infected or who are infected and not receiving care; an absence of information on whether participants knew their current viral load, which may affect risk behavior; and an inability to determine

the order of sexual behavior and viral suppression. In conclusion, the investigators emphasize that behavioral risk reduction is a "necessary component of HIV prevention efforts" and that "clinicians play a vital role in HIV prevention."—*D. Hollander*

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Psychosocial Characteristics Vary According to Outcome Of Pregnancy at Young Age

Women who have had a pregnancy by their mid-20s may differ from others on measures related to psychosocial characteristics and substance use, but how they differ appears to be linked to their pregnancy outcomes, according to findings from a longitudinal study in Australia.[1] For example, at age 24, women who had ever miscarried were more likely than those who had never been pregnant to report symptoms of depression, but women who had had a live birth or an abortion were not. The likelihood of being married or cohabiting was reduced among women who had had an abortion, but not among those who had had other pregnancy outcomes. Nicotine dependence was positively associated with women's having had any early pregnancy, regardless of how it ended.

The study, designed to examine adolescent and young adult development, began in 1992 with a sample of ninth-year students (14–15-year-olds) at 44 public and private schools in the state of Victoria. Participants were followed up every six months until they completed secondary school and then at ages 21 and 24. Pregnancy history, a variety of psychosocial outcomes and several measures of substance use were assessed in the young adult waves, which were conducted via computer-assisted telephone interview. Some 821 women provided all relevant data and constituted the sample for analyses of associations between pregnancy history by age 24 and psychosocial and substance-related characteristics at that age.

In all, 170 women had been pregnant—136 of them once, 34 two or three times. The total number of pregnancies reported was 208, of which 38% had been carried to term, 43% had been terminated, 17% had ended in miscarriage and 1% had ended in stillbirth. Among women who had been pregnant only once, 38% reported a live birth and 46% an abortion; among those who reported more than one pregnancy, 80% had had an abortion.

Initial analyses revealed no clear pattern of relationships between early pregnancy and participants' psychosocial characteristics and substance-related behavior at age 24. Compared with women who had never been pregnant, those who had miscarried, but not those who had had a live birth or an abortion, had a significantly greater prevalence of depressive symptoms (54% vs. 25%); only those who had had an abortion reported a significantly greater level of dissatisfaction with their social role than those who had never been pregnant (63% vs. 44%). No group differences were observed in the proportion who were married or cohabiting (58–77%), but never-pregnant women were the most likely to have completed college (82% vs. 46–60%). Women who had been pregnant were more likely than the never-pregnant group both to report that they currently smoke (48–63% vs. 31%) and to be nicotine-dependent, as defined by a standard scale (24–29% vs. 6%). Binge drinking was reported less often by women who had had a live birth than by those who had never been pregnant (8% vs. 23%), and alcohol dependence was more common among women who had had an abortion or miscarriage (20–29%) than among others (4–8%). Measures related to marijuana use were generally similar across groups.

Logistic regression analyses controlling for parental socioeconomic context and for psychosocial characteristics measured when participants were 15 or 16 years old bore out some of the bivariate findings and identified additional associations. Women who had miscarried had greater odds than those who had never been pregnant of reporting depressive symptoms at age 24 (odds ratio, 5.0), and those who had given birth had reduced odds of having completed college (0.4). In addition, women who had had an abortion had reduced odds of being married or cohabiting (0.4); no associations were found between pregnancy history and social role dissatisfaction. The odds of smoking were elevated among women who had had an abortion (4.1), and the odds of nicotine dependence were elevated for all three groups of women who had been pregnant (3.3 for those who had had a live birth, 4.5 for those who had had an abortion and 10.8 for those who had had a miscarriage). Women who had terminated a pregnancy were more likely than never-pregnant women both to report binge drinking (2.5) and to be alcohol-dependent (2.7); those who had miscarried had an elevated likelihood of reporting binge drinking (4.8), as well as of marijuana dependence (9.5).

The researchers comment that although study participants with an abortion history were not at increased risk of depressive symptoms or social dissatisfaction, the same might not be true for women "in…countries with religious laws that prohibit abortion or in places where this is a highly divisive and political issue." They also note that since the adolescent survey waves did not collect information on pregnancy, they cannot know with certainty the "timing of relevant behaviors and experiences," and that "a profile of psychosocial risk may predate and contribute to the pregnancy, rather than the reverse." Further limitations, they acknowledge, are that the pregnancy outcome groups were not mutually exclusive and that young women who have repeat pregnancies likely are "a particularly vulnerable group," who merit close attention. However, they conclude that their findings support the need to provide young women with broad-based postnatal care, extending beyond physical health concerns, regardless of the outcomes of their pregnancies.—*D. Hollander*

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Social Support, HIV Testing Linked Among Black Men Who Have Sex with Men

Black men who have sex with men have a high prevalence of HIV infection and are less likely than other groups to know their HIV status, and the reasons for these disparities are not well understood. In a Texas study that looked simultaneously at contextual and individual characteristics, social support within this population emerged as a strong correlate of HIV testing.[1] The more support sexually

active participants reported receiving from other black men who have sex with men, the lower their odds of having delayed a recommended twice-yearly HIV test. Reported experiences of racism and homophobia, elements of "structural discrimination" that have received some attention as possible correlates of use of HIV prevention strategies, were not associated with delayed testing.

The study was based on data collected from 813 black men aged 18–29 living in Dallas or Houston in 2009–2010, who had had at least one male sex partner in the past two months and reported that either their last HIV test was negative or they did not know their HIV status. Participants were recruited at a variety of venues, including bars, restaurants, parks and social organizations, but not health service facilities. They used hand-held devices to complete a survey that assessed demographic and psychosocial characteristics, sexual behavior and HIV testing history. Because federal recommendations suggest that sexually active men who have sex with men undergo HIV testing every six months, the researchers considered participants whose last test had been longer than six months before the survey to have delayed testing; they conducted bivariate and multivariate logistic regression analyses to identify measures associated with this outcome.

Participants' median age was 23; three-quarters had at least a high school education. Half were employed full-time, and another one in five were employed part-time; yet, 52% had run out of money at least once in the last year, and 54% had borrowed money during that period. Some 15% had ever been homeless, and 30% had ever been incarcerated. In the two months prior to the survey, 49% had had multiple male sex partners, 51% had had unprotected anal intercourse and 15% had done so with a serodiscordant partner. Thirty percent of men had not had an HIV test in the past six months, including 6% who had never had one.

In bivariate analyses, men who had delayed HIV testing scored significantly higher than those who had been tested in the last six months on scales measuring experiences of racism and homophobia, and significantly lower on a scale measuring social support from other black men who have sex with men. The proportion reporting delayed testing was higher among 18-year-olds (56%) and 27–29-year-olds (36%) than among those aged 19–26 (27%). It also was greater among those reporting a high level of socioeconomic distress than among those reporting a lower level (37% vs. 27%) and was larger among participants who had had unprotected anal sex with a serodiscordant partner than among those who had not (53% vs. 26%).

Results were somewhat different in a logistic regression model containing all of the measures that were related to delayed HIV testing at the bivariate level. Notably, racism and homophobia were no longer significant; however, the more support participants reported from other men who have sex with men, the less likely they were to have delayed testing (odds ratio, 0.8). In addition, 18-year-olds and 27–29-year-olds were more likely than 19–26-year-olds to have delayed testing (3.8 and 1.6, respectively), and the odds were elevated among men reporting recent unprotected anal sex with a serodiscordant partner (2.9).

According to the researchers, their findings "demonstrate the resiliency" of young black men who have sex with men and who face discrimination because of their race or sexual orientation. Perhaps, the researchers speculate, "having strong social support serves as a buffer against many of the structural barriers [that] can impede positive health behavior." While they acknowledge that their study is limited by its cross-sectional design, its sampling approach, the short period used to define delayed testing and the use of men's own reports of their HIV status, they recommend that future research include measures of social support. Doing so, they conclude, could advance the understanding of the association between resiliency among black men who have sex with men and use of preventive services.—*D. Hollander*

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