Published in final edited form as:
Perspect Sex Reprod Health. 2012 March ; 44(1): 30–38. doi:10.1363/4403012.

Missed Conceptions or Misconceptions: Perceived Infertility Among Unmarried Young Adults In the United States

Chelsea Bernhardt Polis [associate] and
Department of Epidemiology, Family and Reproductive Health—both at the Johns Hopkins Bloomberg School of Public Health, Baltimore

Laurie Schwab Zabin [professor emeritus]
Department of Population, Family and Reproductive Health—both at the Johns Hopkins Bloomberg School of Public Health, Baltimore

Abstract

Context—Perceived infertility is an individual's belief that she or he is unable to conceive or impregnate, regardless of whether this belief is medically accurate. This perception may lead to contraceptive nonuse, which may, in turn, lead to unintended pregnancy. Little research has examined perceived infertility among young adults, including potential associations with contraceptive behaviors.

Methods—The frequency of perceived infertility among young adults was assessed using 2009 data from a nationally representative telephone survey of 1,800 unmarried men and women aged 18–29. Multinomial regression analyses assessed associations between respondents' perceived infertility and selected background, reproductive knowledge, sexual experience and contraceptive use characteristics.

Results—Overall, 19% of women and 13% of men believed that they were very likely to be infertile. Hispanic women and women who had received public assistance in the past year had elevated odds of perceived infertility (odds ratios, 3.4 and 3.0, respectively), as did Hispanic men and men of other racial or ethnic minorities, except blacks (2.5 and 6.1, respectively). Men who had some college education, had received sex education or were not in a current relationship had decreased odds of thinking they were very likely to be infertile (0.3–0.4). Among men, perceived infertility was associated with the belief that they were likely to have sex without using a contraceptive in the next three months (2.6).

Conclusions—A substantial proportion of young adults believe they are infertile. Improved provider counseling and sex education may be useful in helping them to better understand their actual probability of infertility, and this knowledge may lead to improved contraceptive use.

In the United States, nearly half of all pregnancies are unintended, and of these, half occur among couples who are not using contraceptives.[1] One reason for contraceptive nonuse is a low perceived risk of pregnancy,[2–5] which may be related to an individual's doubt about his

Author contact: cpolis@jhsph.edu.

or her fertility, regardless of whether this perception is based in medical reality.[6] If individuals believe they are infertile, they may view contraceptive use as unnecessary.

Research on perceived infertility is limited and has focused primarily on adolescent females. Pregnant adolescents frequently say that prior to conceiving, they had doubts about their fertility,[7–9] and perceived infertility in nonpregnant adolescents has been linked to increased odds of contraceptive nonuse,[2,4,9] contraceptive discontinuation[3] and STDs.[4] In addition, 49% of women aged 15–24 who reported an unintended birth in the 2002 National Survey of Family Growth said they had not used a contraceptive at the time of conception because they had believed that they could not get pregnant.[10] National prospective estimates of perceived infertility among the general population are unavailable, and little attention has been paid to characteristics associated with this perception among unmarried young adults, particularly men. The present study assessed the frequency of and variables associated with perceived infertility among young adults in the United States, and examined whether this perception was associated with attitudes and behaviors related to contraceptive use.

Methods

Data

The data come from The Fog Zone data set, a 2009 survey commissioned by the National Campaign to Prevent Teen and Unplanned Pregnancy and carried out by the Guttmacher Institute. Researchers conducted telephone interviews with a nationally representative probability sample of 1,800 unmarried women and men aged 18–29. Survey questions were formulated using a theoretical model developed by Guttmacher. Where possible, questions were worded similarly to those in other national surveys, such as the National Survey of Family Growth, to enhance comparability. The questionnaire was reviewed by national experts in reproductive health, approved by Guttmacher's institutional review board, field-tested, and offered in English and Spanish.

Respondents were contacted in one of three ways: a random-digit-dial sampling of landline telephone numbers, a targeted sampling of listed telephone numbers with a high probability of having an eligible respondent and a random sampling of cell phone numbers. About 50% of respondents were reached through the targeted sampling, 40% through cell phone sampling and 10% through random-digit-dial. To enhance subgroup analyses, blacks and Hispanics were oversampled in the landline samples; no method is available to oversample by race or ethnicity using cell phones. More than 100,000 telephone numbers were dialed to reach the 1,800 respondents. The response rate was approximately 20% for each sample frame, which is comparable to rates in other telephone surveys. Weighted results are nationally representative.

The survey asked: “Some people are unable to become pregnant, even if they want to. How likely do you think it is that you are infertile or will have difficulty getting [a woman] pregnant when you want to?” Possible responses were “not at all likely,” “slightly likely,” “quite likely” and “extremely likely”; we categorized the last two as “very likely.” We excluded 41 individuals who did not answer this question, 43 who were pregnant and 19 who were sterilized. We defined respondents as having perceived infertility if they fell into

the "very likely" category, because each individual does have a small chance of being infertile, and our primary focus was respondents whose level of concern exceeded what might be considered reasonable for an average young adult. We also calculated relative odds of responding "not at all likely," as opposed to "slightly likely," to determine whether any characteristics had a dose-response relationship with perceived infertility (i.e., were associated with both reduced odds of reporting "not likely" and increased odds of reporting "very likely," or vice versa).

A variety of characteristics could be associated with perceived infertility. Only two published studies have attempted to identify such variables; one focused on pregnant adolescents,[7] and the other assessed nulliparous adolescents.[9] These studies considered social and demographic characteristics; variables influencing knowledge about fertility; and sexual, contraceptive and pregnancy experiences. Since this subject has not been studied extensively, and not at all in our population of interest, we examined all variables that were assessed in previous studies and were available in the Fog Zone data set, along with several additional ones we theorized might be relevant.

The social and demographic characteristics we used are age, race or ethnicity, nativity, language used in the childhood home, educational level, school and work status, living situation, insurance status, receipt of public assistance in the past year, religious affiliation and attendance at religious services. Variables we included that might be associated with respondents' knowledge about their fertility are having ever received sex education, awareness that a woman may be more fertile during some days of her menstrual cycle than others and knowledge regarding the likelihood of pregnancy after a single act of intercourse without using a contraceptive, as well as after a year of intercourse without contraception. Characteristics related to sexual experience that we included are sexual relationship status and, if applicable, age at sexual debut; years since sexual debut; number of partners in the past year; and the age difference between the respondent and his or her current partner. We also examined whether respondents agreed with the statement "Many of my friends have had unplanned pregnancies," whether they had ever visited a doctor for sexual health care (i.e., gynecologic exam, birth control, STD or pregnancy test) and whether they (or their partner) had ever used a hormonal method (i.e., the pill, patch, ring, injectable or implant) or the IUD. Finally, we included respondents' history of pregnancy involvement, whether they had children, whether they would be pleased to find out they (or their partner) were pregnant and whether they were currently trying to get (or get their partner) pregnant.

Women who believed they were either slightly or very likely to be infertile were asked about three potential reasons for their perception: A doctor told them they are infertile or might have difficulty getting pregnant, other women in their family are infertile, or they had had sex without using a contraceptive but had not become pregnant. Responses were not mutually exclusive. In addition, sexually active respondents were asked whether they had used any contraceptive method in the past month. Current users of condoms or the pill were asked about consistency of use over the past three months (men were asked only about condoms). Finally, sexually active respondents who were not trying to conceive (regardless of relationship status) were asked whether they believed that in the next three months, they were likely to have sex without using any contraceptive method.

Analysis

Women and men were assessed separately. Certain variables related to sexual activity and contraceptive use were considered for inclusion in a subanalysis restricted to sexually experienced individuals. We examined perceived infertility by respondents' race or ethnicity, as this characteristic was strongly associated with perceived infertility in preliminary analyses. We also assessed stated reasons underlying perceived infertility, and conducted a subanalysis restricted to women who did not base their perception of infertility on a doctor's statement. We were unable to conduct a similar subanalysis for men, since the survey did not ask men why they thought they were likely to be infertile. Finally, we assessed independent associations between perceived infertility and contraceptive nonuse in the last month, inconsistent use of condoms or the pill in the last three months, and whether respondents thought they were likely to have sex without using a contraceptive in the next three months.

All analyses accounted for the complex survey design, and stratified analyses used methods appropriate for sub-population estimation in survey data to ensure calculation of robust standard errors.[11] To provide a descriptive summary, we calculated weighted estimates of the percentage of respondents in each response category, by gender. Next, we conducted multinomial logistic regression analysis. (We did not use ordinal regression because several variables violated the proportional odds assumption.) We performed univariate multinomial regression analysis to estimate relationships between the three levels of perceived likelihood of infertility and all other variables of interest. Variables with p values less than or equal to .20 in univariate analysis were considered for inclusion in multivariate models.[12] Statistical significance was based on the standard errors using Wald tests, and Taylor linearized variance estimation was used to calculate standard errors reflective of the complex survey design. Our final models used multivariate multinomial regression to estimate associations of interest while controlling for potential confounders. Since only 1% of respondents had missing responses on included variables, we did not impute information.

All analyses were done using Stata/SE 10.1 for Windows. The complete survey questionnaire, or exact wording of specific questions and response options, is available upon request.

Results

Descriptive Analysis

The final weighted sample comprised 1,699 unmarried individuals (779 women and 920 men). Sixty percent of respondents were white, while 15% were black, 17% Hispanic, and 7% of another race or ethnicity (Table 1). Nearly nine in 10 were born in the United States, and 85% reported that English was the main language spoken in their childhood home. More than half of respondents (54%) had at least some college education. Forty-four percent were working, 26% were attending school and 18% were doing both. More than a third were living with parents, one in six with a partner and nearly three in 10 with others. Half of respondents had private insurance; women were less likely than men to be uninsured (19% vs. 31%), but more likely to be on Medicaid (31% vs. 13%) or to have received other public

assistance in the past year (16% vs. 5%). More than a quarter of respondents had no religious affiliation, and fewer than half attended religious services at least once a month.

Nearly eight in 10 respondents had received sex education, but fertility-related knowledge was poor. For example, only 34% were aware that a woman's likelihood of conceiving is higher at some times during her menstrual cycle than at others, and fewer than one in 10 believed the chance of pregnancy after one act of intercourse without using a contraceptive was 10% or less, although the actual likelihood is 2–5%.[13] Moreover, only a third of respondents correctly estimated the likelihood of getting pregnant after a year of sex without contraception.

Most respondents had had heterosexual vaginal intercourse (85%), but 16% of women and 13% of men had not. Four in 10 were aged 15–17 at first intercourse, and a quarter were 18 or older; 44% reported six or more years since sexual debut. One-third of respondents had had more than one sex partner in the past year.

A majority of respondents (62%) had many friends who had had unplanned pregnancies. Women were far more likely than men to have seen a doctor for sexual health reasons (84% vs. 39%). Sixty-nine percent of women had ever used a hormonal method or an IUD, and 52% of men said a partner had done so. Three-quarters of respondents reported no pregnancy involvement, but 29% of women and 13% of men currently had children. In addition, 6% of women and 7% of men had been involved in a pregnancy but did not have children, indicating probable elective or spontaneous abortions, since adoption and infant mortality are rare in this population.[14,15] Women were less likely than men to believe they would be pleased if they discovered they were involved in a pregnancy (27% vs. 46%), and only 3% of respondents were currently attempting to get (or get a partner) pregnant.

Overall, 19% of women and 13% of men thought they were very likely to be infertile (Figure 1). Women were more likely than men to hold this belief, except for respondents in the “other” race or ethnicity category. Both as a group and by gender, whites were less likely to report perceived infertility than their minority counterparts. More than a third of Hispanic women thought they were very likely to be infertile.

Women's Reasons for Perceived Infertility

Among women who believed they were very likely to be infertile, 41% based this perception on a doctor's statement, 37% mentioned not getting pregnant after having had sex without a contraceptive, 18% reported having an infertile relative and 33% chose none of these reasons (Figure 2, page 34). The most frequently cited reasons for perceived infertility appeared to vary by race and ethnicity, though drawing solid conclusions about these differences is difficult, since cell sizes were small.

Compared with women who believed they were slightly likely to be infertile, those who had an elevated perception of infertility were more likely to base this on a doctor's statement (42% vs. 17%, $p \leq .01$). However, among those who relied on a doctor's statement, 20% also reported never having visited a doctor for sexual health care.

Correlates of Perceived Infertility

In univariate analysis, several characteristics were associated with perceived infertility in both men and women (not shown). Hispanic women had higher odds than white women of believing they were infertile (odds ratio, 4.0), and minority men had greater odds than white men of having this perception (3.4–3.8). The odds of perceived infertility were elevated among respondents who spoke a language other than English in their childhood home (2.5 for women, 3.8 for men), and were higher among individuals on Medicaid (2.8–2.9) and among uninsured men (3.0) than among those who had private insurance. Compared with individuals who reported no pregnancy involvement (including those who had never had sex), childless but previously pregnant women had marginally higher odds of perceived infertility (2.5, $p \leq .10$), as did men with children (3.2). Respondents who said they would be pleased if they discovered they had conceived or impregnated a partner had elevated odds of believing they were infertile (2.5 for women, 2.2 for men). Level of education was generally inversely associated with the odds of perceived infertility.

Other characteristics were associated with perceived infertility in only one gender. Among women, these were having been on public assistance in the past year (odds ratio, 3.6), overestimating the chance of pregnancy after one year of sex without using contraceptives (2.2), currently attempting to get pregnant (3.5) and having many friends who had had unplanned pregnancies (2.2). Among men, characteristics associated with perceived infertility were being foreign-born (4.0), living alone (2.3) or with someone other than a parent or partner (2.8), and having had three or more recent sex partners (3.9). Men who were dating women three or more years younger than themselves also had elevated odds of perceived infertility (3.9), but cell sizes were small, as this calculation was restricted to individuals in current relationships. Several characteristics were associated with decreased odds of perceived infertility in men: being in school (0.4), working while attending school (0.2), having received sex education (0.3) and not being in a current sexual relationship (0.5).

In multivariate analysis, Hispanic women and women who had recently received public assistance had elevated odds of believing they were very likely to be infertile (odds ratios, 3.4 and 3.0, respectively—Table 2).* Although no individual educational category was significant among women, level of education was inversely associated with perceived infertility. Hispanic men and men of “other” races or ethnicities had higher odds of thinking they were at elevated risk of infertility than did whites (2.5 and 6.1, respectively). Sixty-two percent of men in the “other” category were Asian, and the remainder were of unidentified race or ethnicity; the odds were elevated for both groups (6.5 and 5.2, respectively—not shown). Being black was not associated with perceived infertility, but blacks were the most likely to have experienced a previous pregnancy (47%, compared with 33% of Hispanics, 22% of whites and 14% of other individuals). Having some college education was inversely associated with perceived infertility among men (0.3), as were having received sex

*The exclusion of women who based their perceived infertility on medical advice (under the assumption that they were the most likely to actually be infertile) did not significantly change associations. Odds ratios increased to 4.2 for Hispanic women and to 4.0 for women who had received public assistance, but confidence intervals were wider because of the restricted sample size.

education, being sexually inexperienced and not being in a current relationship (0.4 for each).

As expected, women who had children were more likely than those who had never been pregnant to think they were not at risk of infertility (odds ratio, 2.9). Interestingly, women who had been pregnant but did not have children appeared to have elevated odds of believing they were not likely to be infertile, and similar odds of thinking they were very likely to be infertile; although the magnitude of these odds was notable, neither finding was significant, probably because of small cell sizes. The more highly educated women and men tended to cluster within the “slightly likely” category, and had reduced, though in some cases nonsignificant, odds of believing they were either not likely or very likely to be infertile.

Sexually Experienced Individuals

We examined additional characteristics among sexually experienced individuals: age at first sex, years since sexual debut, number of partners in the past year and, for women, ever-use of any contraceptive and of a hormonal method or IUD. None of these characteristics contributed to the original model for men, but ever-use of contraceptives was inversely associated with perceived infertility among women (odds ratio, 0.1—not shown). Hispanic ethnicity remained significant for both genders, but the association was attenuated among women (2.6, compared with 3.4 in the full model), suggesting high levels of perceived infertility among sexually inexperienced female Hispanics. Indeed, while 29% of sexually experienced Hispanic females believed they were very likely to be infertile, 64% of their inexperienced counterparts believed this, but confidence intervals were wide (19–41% and 36–85%, respectively) because of the small cell sizes.

Contraceptive Use and Use Intentions

To assess whether perceived infertility was associated with contraceptive use in the last month, we restricted analysis to individuals who were in a current relationship and not trying to conceive, to distinguish whether nonuse reflected having sex without using a contraceptive or a lack of sexual activity. In this restricted sample, perceived infertility was not associated with failure to use contraceptives in the past month (Table 3, page 36). When we further restricted the sample to individuals who had used condoms or the pill in the last month, we found no association between perceived infertility and inconsistent condom use by men in the last three months, or inconsistent pill use by women over this period, although both estimates were in the expected direction. Finally, among a larger sample of sexually active individuals who were not trying to conceive (regardless of relationship status), perceived infertility was associated with men's expecting to have sex without using a contraceptive in the next three months (odds ratio, 2.6).

Discussion

A substantial proportion of young adults (19% of women and 13% of men) believed they were very likely to be infertile, and this corresponds to about 3.2 million women and 2.6 million men in the United States. Some may actually be infertile, but only 6% of married

women aged 15–29 in the United States are likely to be infertile.[10] Comparable data on infertility are difficult to calculate for men, but a substantial proportion of men likely underestimate their fertility. Our finding that 19% of women reported an elevated perception of infertility is slightly higher than that of a study of 15–24-year-old, sexually active women sampled in health clinics in northern California, of whom 15% believed they were infertile.[2]

While a statement from a doctor was a commonly cited reason for women's perceived infertility, one-fifth of those citing this reason also reported that they had never visited a doctor for sexual health care, raising concerns about response validity and what women may interpret as medical advice. Another common reason cited was having not gotten pregnant after having had sex without using a contraceptive. Since infertility is typically defined as failure to conceive after one or two years of intercourse without contraception, perceived infertility after multiple acts of unprotected sex may be reasonable. However, most young adults appear to overestimate the probability of pregnancy; fewer than one in 10 respondents knew the chance of pregnancy after one act of intercourse without a contraceptive was 10% or less. Some public health messages designed to encourage consistent contraceptive use focus on the idea that pregnancy can occur after having intercourse a single time without using a contraceptive.[4] While true, this message does not adequately explain pregnancy as a probabilistic event that depends, in part, upon the timing of intercourse relative to ovulation. This oversimplified message may inadvertently lead some individuals to assume they are infertile if pregnancy does not occur after one or several acts of intercourse without a contraceptive, and could paradoxically result in reduced motivation to use contraceptives. Some women based their perception of infertility on having a family member who was infertile. Perhaps this situation provokes reflection about personal infertility or about the possibility that infertility is a genetic or contagious condition. Alternatively, knowing of high levels of fertility among friends or living in a context where early childbearing is normative may lead individuals to believe they are infertile, particularly if they remain nulligravid into young adulthood.[2] About one-third of sampled women did not cite any of these three reasons for perceived infertility; future research could elucidate alternate reasons behind this perception.

Multivariate analysis identified various characteristics associated with perceived infertility, including several suggestive of social or financial disadvantage. Additionally, contraceptive experience was inversely associated with perceived infertility in women, as was receipt of sex education in men; these findings may suggest that contact with clinicians or sex education teachers reduces perceptions of infertility, although we cannot determine causality from these cross-sectional data.

Allowing respondents to select from multiple levels of perceived infertility revealed that use of a dichotomized variable (i.e., no chance versus any chance of being infertile) in future research could blur important distinctions. For example, since more highly educated individuals clustered within the “slightly likely to be infertile” category, education may be associated with both an acknowledgment that infertility is possible and a recognition that it is not highly likely. Similarly, likely abortion experience—as suggested by women's having been pregnant but having no children—was marginally associated with both the lowest and the highest infertility categories. The large point estimates for women in this situation may

reflect their reduced belief in the possibility of being infertile because they have already "proven" their fertility, as well as concerns that a spontaneous abortion is indicative of an inability to carry a pregnancy to term, or that having had an abortion procedure may result in future infertility. Providing accurate information about postabortion fertility may have implications for reducing perceptions of infertility in young adult women who have had an abortion (and potentially for reducing repeat unintended pregnancies), though our data cannot confirm this.

Young adult Hispanic women, and the sexually inexperienced in particular, may be more likely than whites to perceive themselves as infertile, but the reasons driving this perception remain unclear. Qualitative research suggests that infertility may be of particular concern for Hispanic couples in the United States, given the strong cultural orientation toward childbearing and stigma associated with infertility,[16] but research on the relationship between perceived infertility and race or ethnicity among young adults is limited. Future qualitative research among sexually experienced and inexperienced young adult Hispanic women could elucidate the associations we have found.

Our data suggest that perceived infertility is associated with men's belief that they are likely to have sex in the near future without using any contraceptive method, and raise questions regarding other potential associations with contraceptive behavior. Perceived infertility was not associated with recent contraceptive nonuse, or with inconsistent method use, but these analyses were restricted to small subgroups for methodological reasons, which reduced statistical power. Furthermore, outcomes related to nonuse, as well as to inconsistent use, may depend in part on partner characteristics, whereas intention to use contraceptives may be more reflective of the respondent himself or herself, and could be expected to correlate more closely with an individual's perception of his or her infertility. Given that perceived infertility has been associated with reduced contraceptive use among adolescents,[2–4,9] some of our nonsignificant findings merit additional study with larger samples. Despite the use of restricted samples in these analyses, our findings were in the expected direction for associations between perceived infertility and contraceptive nonuse, inconsistent method use, and belief that having sex without using a contraceptive in the near future is likely.

Limitations and Strengths

Our study has several limitations. We did not measure actual infertility, defined as having sex without using contraceptives for one or two years and without a recognized pregnancy. In addition, the questionnaire item addressing perceived infertility may have tapped two domains: whether respondents believe they are currently infertile and whether they believe they will be infertile at a future date. Furthermore, several characteristics that were not captured may be related to perceived infertility— including having experienced an STD or sexual abuse, pregnancy desires of sexual partners, regularity of the menstrual cycle, concerns about side effects of hormonal contraceptives and substance use. We attempted to exclude sterilized individuals, but some misclassification may have occurred. Moreover, small cell sizes resulting from use of multinomial regression and categorical variables reduced statistical power to detect associations. Also, data were self-reported and

retrospective, which may result in intentional or accidental misreporting. Finally, we are unable to draw conclusions regarding causality, since these data are cross-sectional.

Despite these limitations, our analysis has several important strengths. To our knowledge, this is the first study to assess perceived infertility in a nationally representative sample of young adults in the United States, and the first to examine this issue among men. The large sample size enabled us to perform various stratified analyses and control for several potential confounding variables. Furthermore, the rich data set allowed a detailed exploration of the levels of and reasons underlying perceived infertility, as well as an examination of several outcomes related to contraceptive use.

Conclusions

A substantial number of young adults in the United States believe themselves to be infertile. Individuals with this perception may be less motivated than others to use contraceptives, and unless they are medically infertile, they may be at increased risk of unintended pregnancy. Providers can address this issue by asking clients about their infertility perceptions, discussing reasons behind these perceptions and explaining a client's actual likelihood of being infertile. Discussions with young adults on the importance of dual protection against pregnancy and STDs could be rearticulated as discussions on “triple protection”—incorporating the idea of fertility preservation by avoiding STDs through use of condoms—to highlight the relationship between STD prevention and fertility preservation.[17] In addition, improved messages about the probabilistic nature of conception could be incorporated into sex education and counseling materials intended to reach young adults before an unintended pregnancy occurs, perhaps when a woman receives negative pregnancy test results.[18] Our findings raise questions regarding the intersections between race and ethnicity and perceived infertility among young adults, and qualitative studies may help to inform appropriate responses and enhance cultural competency among professionals who work with young adults in areas related to reproductive health. Ultimately, addressing both the reproductive fears and the reproductive desires of young adults may lead to their improved contraceptive use and fewer misperceptions about their fertility.

Acknowledgments

The authors thank Ron Gray and Mark Emerson for comments on an early draft of this article, Jennifer Frost and Lawrence Finer for assistance with the data set, and the National Campaign to Prevent Teen and Unplanned Pregnancy for funding this analysis.

References

1. Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. Perspectives on Sexual and Reproductive Health. 2006; 38(2):90–96. [PubMed: 16772190]
2. Raine T, Minnis AM, Padian NS. Determinants of contraceptive method among young women at risk for unintended pregnancy and sexually transmitted infections. Contraception. 2003; 68(1):19–25. [PubMed: 12878282]
3. Kinsella EO, et al. Characteristics of adolescent women who stop using contraception after use at first sexual intercourse. Journal of Pediatric and Adolescent Gynecology. 2007; 20(2):73–81. [PubMed: 17418390]

4. Downs J, et al. When “it only takes once” fails: perceived infertility predicts condom use and STI acquisition. Journal of Pediatric and Adolescent Gynecology. 2004; 17(3):224.
5. Miller WB. Why some women fail to use their contraceptive method: a psychological investigation. Family Planning Perspectives. 1986; 18(1):27–32. [PubMed: 3803546]
6. Breheny M, Stephens C. Barriers to effective contraception and strategies for overcoming them among adolescent mothers. Public Health Nursing. 2004; 21(3):220–227. [PubMed: 15144366]
7. White E, et al. Fear of inability to conceive in pregnant adolescents. Obstetrics & Gynecology. 2006; 108(6):1411–1416. [PubMed: 17138774]
8. Stevens-Simon C, et al. Why pregnant adolescents say they did not use contraceptives prior to conception. Journal of Adolescent Health. 1996; 19(1):48–53. [PubMed: 8842860]
9. Rainey DY, Stevens-Simon C, Kaplan DW. Self-perception of infertility among female adolescents. American Journal of Diseases of Children. 1993; 147(10):1053–1056. [PubMed: 8213675]
10. Chandra A, et al. Fertility, family planning, and reproductive health of U.S. women: data from the 2002 National Survey of Family Growth. Vital and Health Statistics. 2005; 23(25)
11. Cochran, W. Sampling Techniques. third. New York: Wiley; 1977.
12. Hosmer, DW.; Lemeshow, SL. Applied Logistic Regression. second. New York: Wiley; 2000.
13. Wilcox AJ, et al. Likelihood of conception with a single act of intercourse: providing benchmark rates for assessment of post-coital contraceptives. Contraception. 2001; 63(4):211–215. [PubMed: 11376648]
14. Jones J. Adoption experiences of women and men and demand for children to adopt by women 18–44 years of age in the United States, 2002. Vital and Health Statistics. 2008; 23(27)
15. Mathews TJ, MacDorman MF. Infant mortality statistics from the 2006 period linked birth/infant death data set. National Vital Statistics Reports. 2010; 58(17)
16. Becker G, et al. Infertility among low-income Latinos. Fertility and Sterility. 2006; 85(4):882–887. [PubMed: 16580369]
17. Brady M. Preventing sexually transmitted infections and unintended pregnancy, and safeguarding fertility: triple protection needs of young women. Reproductive Health Matters. 2003; 11(22):134–141. [PubMed: 14708404]
18. Zabin LS, et al. Adolescents with negative pregnancy test results: an accessible at-risk group. Journal of the American Medical Association. 1996; 275(2):113–117. [PubMed: 8531305]

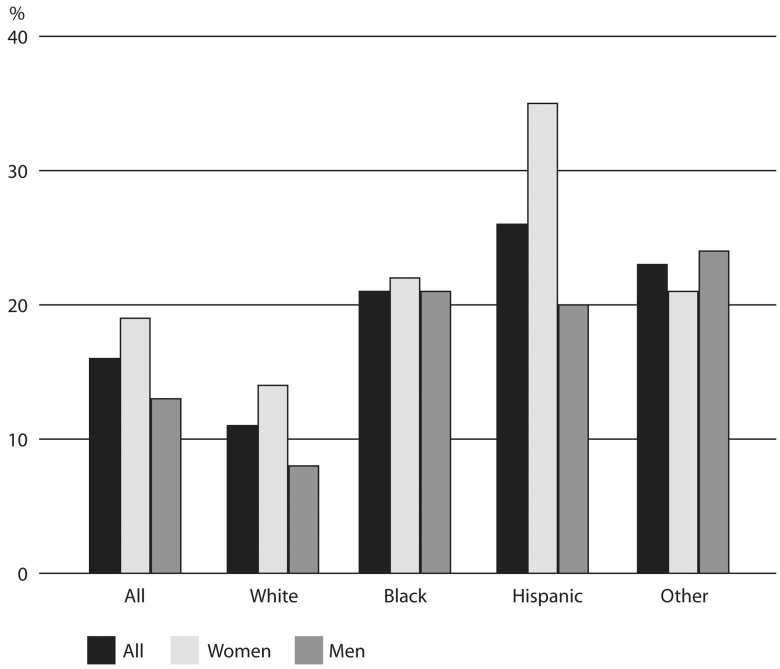

Figure 1. Percentage of respondents who believed they were very likely to be infertile, by gender, according to race or ethnicity

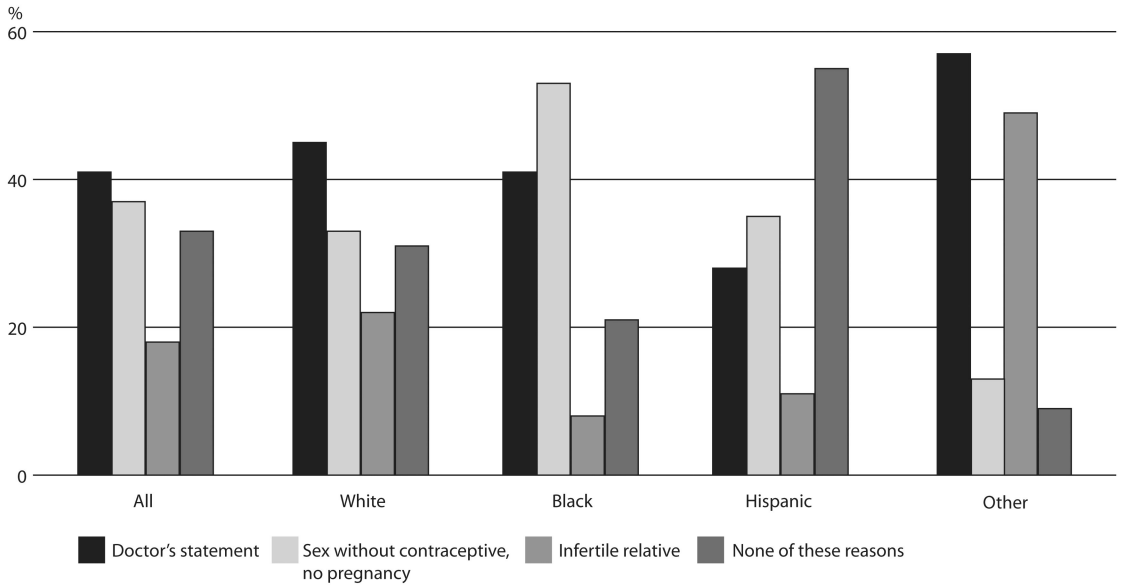

Figure 2. Among women who believed they were very likely to be infertile, percentage who identified selected reasons, by race or ethnicity

Note: These reasons are not mutually exclusive

Table 1

Percentage of respondents to a national survey of young adults, by selected characteristics, according to gender, United States, 2009

Characteristic	All (N=1,699)	Females (N=779)	Males (N=920)
SOCIAL AND DEMOGRAPHIC			
Age			
18–19	26	27	26
20–21	19	22	17
22–24	22	20	23
25–29	32	31	33
Race/ethnicity**			
White	60	60	60
Black	15	19	12
Hispanic	17	14	20
Other	7	7	8
U.S.-born	88	90	86
Spoke English in childhood home**	85	88	82
Education			
<high school	17	17	17
High school/GED/other	29	26	32
Some postsecondary	36	37	35
≥college	18	20	16
School/work status			
Working	44	39	48
In school	26	28	24
Both	18	19	17
Other	12	14	11
Living situation			
With parents	36	37	35
With partner	16	18	14
With others	28	25	31
Alone	19	18	20
Insurance status***			
Private only	52	49	55
Any Medicaid	21	31	13
Uninsured	25	19	31
Other/don't know	2	2	2
Received public assistance in past year***	10	16	5
Religious affiliation*			
Catholic	20	21	20
Born-again/fundamentalist/evangelical	26	30	23

Characteristic	All (N=1,699)	Females (N=779)	Males (N=920)
Other Christian	19	20	18
Other/don't know/refused	8	5	10
None	27	25	29
Attendance at religious services			
≥once per week	25	26	24
1–3 times per month	19	21	18
<once per month	21	19	23
Never	35	33	36
KNOWLEDGE AND EXPERIENCE			
Received sex education	78	77	79
Knows fertile period[***]	34	43	27
Perceived chance of pregnancy after one act of sex without contraceptive (%)[*]			
0–10	8	7	9
11–24	4	4	5
25–49	9	6	11
50–74	39	37	41
75–100	40	46	35
Perceived chance of pregnancy after year of sex without contraceptives[**]			
Correctly estimates	35	31	38
Underestimates	19	16	21
Overestimates	46	52	41
Relationship status[**]			
Never had sex	15	16	13
In current relationship	54	59	51
Has had sex, no current relationship	31	25	36
Age at first sex[*]			
Never had sex	15	16	13
<15	17	12	21
15–17	42	44	40
≥18	25	26	25
Years since sexual debut[*]			
Never had sex	15	16	13
0–5	40	42	37
≥6	44	39	49
No. of sex partners in past year[***]			
Never had sex	15	16	13
0	8	6	10
1	43	52	36
2	13	13	13
≥3	20	13	26
Has many friends who have had unplanned pregnancies[**]	62	67	57

Characteristic	All (N=1,699)	Females (N=779)	Males (N=920)
Ever visited a doctor for sexual health[***]	60	84	39
Ever used hormonal method/IUD[†]			
Never had sex	15	16	13
No	25	15	35
Yes	60	69	52
Pregnancy experience[†, ***]			
Never had sex	15	16	13
Has had sex, never-pregnant	59	48	67
Ever-pregnant, has children	20	29	13
Ever-pregnant, no children	6	6	7
Would be pleased about a pregnancy[***]	37	27	46
Trying to get/get partner pregnant	3	3	2
PERCEIVED INFERTILITY			
Likelihood of being infertile[**]			
Not likely	48	40	54
Slightly likely	36	41	33
Very likely	16	19	13

[*] p<.05.

[**] p<.01.

[***] p<.001.

[†] For men, refers to partner's experience.

Notes: Ns are weighted. Sexual behavior measures refer to vaginal intercourse. Pearson chi-square tests corrected for survey design. Percentages may not total 100 because of missing data. GED=general equivalency diploma.

Table 2

Adjusted odds ratios (and 95% confidence intervals) from multinomial regression analysis assessing the likelihood that respondents perceived that they were very likely or not likely, rather than slightly likely, to be infertile, by selected characteristics, according to gender

Characteristic	Females (N=763)		Males (N=914)	
	Very likely	Not likely	Very likely	Not likely
Race/ethnicity				
White (ref)	1.00	1.00	1.00	1.00
Black	1.45 (0.61–3.44)	0.75 (0.39–1.44)	2.29 (0.80–6.52)	1.45 (0.76–2.78)
Hispanic	3.44 (1.56–7.59)**	1.03 (0.52–2.05)	2.51 (1.12–5.65)*	1.31 (0.72–2.39)
Other	1.72 (0.58–5.06)	0.92 (0.41–2.06)	6.08 (2.14–17.24)***	1.14 (0.51–2.59)
Wald statistic	*1.88*		*2.86***	
Education				
<high school (ref)	1.00	1.00	1.00	1.00
High school/GED/other	1.66 (0.61–4.57)	0.91 (0.40–2.08)	0.89 (0.34–2.38)	0.53 (0.26–1.07)
Some post-secondary	0.70 (0.27–1.79)	0.65 (0.29–1.43)	0.27 (0.10–0.70)**	0.37 (0.19–0.73)**
≥college	0.37 (0.12–1.09)	0.59 (0.24–1.49)	0.33 (0.09–1.15)	0.58 (0.26–1.30)
Wald statistic	*2.09**		*3.11***	
Received sex education				
No (ref)	1.00	1.00	1.00	1.00
Yes	1.06 (0.50–2.23)	0.55 (0.31–0.99)*	0.44 (0.21–0.91)*	1.04 (0.61–1.76)
Wald statistic	*2.69*		*3.63**	
Received public assistance in past year				
No (ref)	1.00	1.00		
Yes	3.00 (1.14–7.87)*	1.12 (0.49–2.59)		
Wald statistic	*2.74*			
Pregnancy experience				
Never-pregnant (ref)	1.00	1.00		
Ever-pregnant, has children	0.62 (0.26–1.46)	2.92 (1.57–5.45)***		
Ever-pregnant, no children	2.26 (0.81–6.31)	2.25 (0.92–5.51)		
Wald statistic	*5.56****			
Trying to get pregnant				
No (ref)	1.00	1.00		
Yes	1.86 (0.49–7.13)	0.13 (0.03–0.52)**		
Wald statistic	*7.87****			
Religious affiliation				
None (ref)			1.00	1.00
Catholic			1.30 (0.52–3.26)	1.30 (0.71–2.40)

Characteristic	Females (N=763)		Males (N=914)	
	Very likely	Not likely	Very likely	Not likely
Born-again/fundamentalist/evangelical			2.14 (0.87–5.27)	2.22 (1.24–3.98)**
Other Christian			1.27 (0.41–3.93)	1.37 (0.73–2.58)
Other/don't know/refused			0.29 (0.08–1.04)	0.72 (0.33–1.58)
Wald statistic			*1. 97**	
Relationship status				
In current relationship (ref)			1.00	1.00
Has had sex, no cur rent relationship			0.40 (0.19–0.82)*	1.02 (0.64–1.62)
Never had sex			0.35 (0.14–0.89)*	1.28 (0.73–2.26)
Wald statistic			*3.23**	

* p≤.05.

** p≤.01.

*** p≤.001.

Notes: Ns are weighted. The models for each gender were adjusted for the variables shown in their respective columns. ref=reference group.

Table 3

Adjusted odds ratios (and 95% confidence intervals) from multinomial regression analysis assessing the likelihood that sexually active respondents who were not trying to conceive perceived that they were very likely, rather than slightly likely, to be infertile, by selected measures of contraceptive use and intention to use

Measure	Females†		Males‡	
	N	Odds ratio	N	Odds ratio
Method use§				
None††	255	1.57 (0.58–4.23)	220	0.85 (0.30–2.36)
Inconsistent condom‡‡	146	0.82 (0.26–2.60)	195	1.89 (0.71–5.03)
Inconsistent pill‡‡	160	1.70 (0.44–6.53)	na	na
Believe sex without contraceptive is likely in next three mos.	328	1.63 (0.64–4.13)	315	2.64 (1.07–6.53)*

*p<.05.

†Adjusted for race or ethnicity, education, receipt of sex education, receipt of public assistance and pregnancy experience.

‡Adjusted for race or ethnicity, education, receipt of sex education, religious affiliation and current sexual relationship status.

§Restricted to individuals in a current relationship.

††In past month.

‡‡In past three months; restricted to current users of each method.

Notes: Ns are weighted. na=not applicable.