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Changes in the Measurement of Unintended Fertility: 1995 and 2002 National Surveys of Family Growth

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Abstract

In the 2002 cycle of the National Survey of Family Growth, changes to the question measuring unintended fertility were introduced. These changes were designed to improve the reporting of unintended and particularly unwanted births by directing women to answer questions with respect to their feelings before they got pregnant and by reminding women to take into account their long term fertility plans when reporting on the intendedness of births. In this article, we compare data from the 1995 and 2002 cycles in order to assess the impact of the change in question wording. We find that the 2002 version of the question elicited higher levels of reported unwanted fertility and slightly lower levels of seriously mistimed fertility. Using the 1995 and 2002 versions of the questions together produces misleading estimates of change over time in unintended fertility, especially unwanted fertility, and in the association between age and unwanted fertility.

Unintended pregnancy and childbearing have long been used as indicators of population reproductive health (Trussell, Vaughan, and Stanford 1999). In the United States, high levels of unintended childbearing have captured attention in both the academic and public health arenas for a number of reasons. First, unintended childbearing in the U.S. is substantially higher than that in other western industrialized countries and contributes to our higher overall fertility rate (Morgan 2003). Second, unintended births have been associated with negative health and developmental outcomes for families, women, and children (Logan, Holcombe, Manlove, and Ryan 2007). As such, it is a goal of *Healthy People 2010*, which establishes the nation's health goals for the decade, to reduce unintended pregnancies from 49% of all pregnancies to 30% by 2010, thereby also reducing unintended births (U.S. Department of Health and Human Services, 2000). Lastly, because unintended fertility tends to be disproportionately concentrated among young, unmarried, minority women, continued high levels of unintended childbearing may exacerbate race/ethnic and socioeconomic inequalities in women's and children's wellbeing.

Unintended fertility is a composite measure that includes pregnancies or births identified as unwanted (no more pregnancies/births wanted at all in the future at the time of pregnancy) or as mistimed (pregnancies/births that occurred earlier than desired). A distinction between unwanted and mistimed births is usually made because they generally reflect concerns at different points in the lifecourse and because unwanted births tend to be more strongly correlated with negative outcomes (Santelli et al. 2003). More recently, mistimed births have been further divided into those that are mistimed by more or less than two years, as research has shown that the births that occur two or more years early ("seriously mistimed births") are more similar to unwanted births in terms of associations with negative outcomes (Abma, Mosher, and Jones 2008; Lindberg, Finer, and Stokes-Prindle 2008). Two measures are commonly used to examine

any of these indicators of unintended fertility: birth ratios (the proportion of all births identified as unintended, mistimed, unwanted, etc.) and fertility rates (the rate of unintended, mistimed, unwanted, etc. births to all women at risk of a birth).

Earlier efforts to reduce unintended pregnancies and births appear to have been successful, but after a decade of decline in the late 1980s and early 1990s, the proportion of pregnancies identified as unintended seems to have stagnated in the late 1990s (Finer and Henshaw 2006; Henshaw 1998). Perhaps of more concern, the *unwanted* pregnancy rate appears to have increased during this period by roughly 4% (The National Campaign to Prevent Teen and Unplanned Pregnancy), and the proportion of births identified as unwanted at conception increased from 9.9% in 1996 to 14.1% in 2003 (Ventura, Abma, Mosher, and Henshaw 2008). It is unclear why unwanted pregnancies and births would have increased, though speculative reasons include reductions in the Title X family planning program that provides contraceptive funding for low-income women (National Family Planning and Reproductive Health Association 2008), declining availability of abortion services (Finer and Henshaw 2003; Henshaw and Finer 2003), and increased focus on abstinence-only education in public schools (Kohler, Manhart, and Lafferty 2007).

However, there is some reason to question whether the increase in unwanted pregnancy and childbearing reflect real changes in behavior. The primary source of national data on unwanted and unintended childbearing is the National Survey of Family Growth (NSFG) series, a set of surveys funded and administered by the National Center for Health Statistics (London, Peterson, and Piccinino 1995; Ventura et al. 2008). These nationally representative, repeated cross-sectional surveys have been fielded at regular intervals since the early 1970s and are designed to produce consistent time-series data as much as possible. However, the content of the

surveys is changed periodically in order to reflect changing family formation behavior and changing standards for measurement of key indicators. Of particular concern for the measurement of unintended fertility, the wording of the question measuring birth intendedness was changed between the 1995 and 2002 surveys in order to better capture attitudes at the time of conception. In this article, we investigate the consequences of the change in question wording on measured levels of unintended, unwanted, and mistimed childbearing and demonstrate that apparent recent increases in unwanted fertility result largely from relatively minor changes in the survey rather than from behavioral change among women.

Changes in the 2002 National Survey in Family Growth

Since the first cycle in 1973, the NSFG has asked women whether they wanted each of their births (though this question was asked only of married women in the 1973 and 1976 cycles). Respondents were also asked whether wanted births occurred too early, on time, or too late. Responses from these questions were combined to create an overall measure of birth intendedness with the following categories: later than wanted, right time, too soon, indifferent, and unwanted. From 1973 through 1995, the question on wantedness read, “At the time you became pregnant, did you yourself actually want to have (a)nother baby at some time?” The goal of the question was that respondents would answer negatively if they never wanted any children in future, and a negative answer would indicate an unwanted pregnancy; it is worth noting that there are no questions that directly inquire whether a birth was wanted or intended (Klerman 2000). However, there was reason to suspect that this question was misunderstood by some respondents (London, Peterson, and Piccinino 1995).

First, reported levels of unwanted pregnancy among young women have been high. In the 1988 cycle of the NSFG, about a fifth of births to teenagers in the five years preceding the

survey were reported as unwanted (Piccinino 1994); it is unlikely that many very young women would have already decided to never have any children, especially given that 92% of teen women reported in the same survey that they intended to have at least one child at some point in their life. Testing in the National Center for Health Statistics Questionnaire Design Research Laboratory found that many women were reporting births as unwanted when they were actually mistimed (sometimes by many years) or when the women did not want to have children with that partner (London, Peterson, and Piccinino 1995).

Second, cognitive interviews commissioned by the NSFG found that women were likely to respond to the question about intentions with reference to their feelings during pregnancy, rather than before the pregnancy or right when they found out they were pregnant (Klerman and Pulley 1999). These interviews also showed that women's feelings about a pregnancy tended to grow more positive as the pregnancy progressed and after the child was born. It may be that women feel more positive as they get used to the idea of being pregnant and having a child, or the experience of pregnancy and motherhood may be less negative than they anticipate. In any case, answering the question in reference to feelings during pregnancy rather than before the pregnancy results in underreporting unintended and unwanted pregnancies.

In response to these two conflicting patterns (overreporting of unwanted births by teenagers but underreporting of unwanted births overall), two changes were made to the wording of the intentions question. In 2002, the question was modified to read, "*Right before you become pregnant, did you yourself want to have a(nother) baby at any time in the future?*" (italics added). By replacing the phrase "at the time you became pregnant" with "right before you became pregnant," the question sought to focus women on their feelings before the pregnancy rather than during the pregnancy and reduce underreporting of unintended and unwanted

pregnancies. If this part of the change in question wording was successful, it would result in higher levels of reported unwanted pregnancies in the 2002 survey even if behavior remained the same. Changing “at some time” to “at any time in the future” was designed to focus women on long-term childbearing plans. This part of the change in wording was intended to reduce the misreporting of mistimed births as unwanted births and would tend to reduce overall levels of reported unwanted births. The two changes might have equal and opposite effects, or one effect (increased or decreased reporting of unwantedness) might be stronger, or neither change might have substantial effects. We use data from the 1995 and 2002 surveys to compare the results of the changed question with the earlier question from the 1995 survey and assess the net impact of changes.

Data and methods

The National Survey of Family Growth (NSFG) is a series of cross-sectional surveys designed to produce comparable information on fertility and family formation in the United States over time. The surveys are nationally representative of women aged 15-44. Each survey collects full birth histories as well as marriage histories and, in recent surveys, cohabitation histories. Respondents are asked about current fertility intentions, fertility intentions at the time of previous pregnancies, and past and current contraceptive use. This analysis focuses on the questions dealing with birth intendedness described in detail above.

We examine data on unintended fertility for the period 1990-1994, the five years before the 1995 survey. Both the 1995 and 2002 NSFG include retrospective histories covering that period. If the questions in the two surveys are interpreted by respondents in a similar manner, the two surveys should produce consistent estimates of unintended fertility. That is, looking at the same set of births (here, births during 1990-1994), we would expect that respondents would

characterize births in the same manner in both surveys if the two questions tapped into the same set of attitudes toward wanting a birth. Of course, the two surveys interview different sets of women and capture different births. But since the surveys are nationally representative, they should produce comparable aggregate estimates, assuming survey administration procedures are the same.

We adjust our analytic sample to account for variations in sample construction across the two surveys. Because the surveys were conducted among women age 15-44 at different times, the age structures of their samples in the period 1990-1994 are different. For instance, women age 40 in 1994 were eligible to be included in the 1995 NSFG, but were 46 in 2002 and thus outside the age range of the 2002 survey. We therefore limit our analysis to women age 15-29 in the period 1990-1994 (and births to these women), who were eligible for inclusion in both surveys.¹ In addition, we exclude foreign-born women from our analysis because immigration between 1995 and 2002 changed the sample frame for foreign-born women. Finally, we calculate descriptive statistics separately by race and ethnicity to account for differential composition and rates of oversampling of racial and ethnic minorities.

Our methods are straightforward. First, we calculate birth rates (total, unwanted, unintended, seriously mistimed) and birth ratios (proportion unwanted, proportion unintended, proportion seriously mistimed) for women age 15-29 during the period 1990-1994 using both the 1995 and 2002 surveys and compare these results. We use the NSFG pregnancy files to produce counts of unwanted, unintended, and seriously mistimed births. We also count the number of person-years lived by women age 15-29 in the period in question and use these figures along

¹ In fact, the age range of women eligible to be included in both surveys is slightly larger than 15-29. Women up to age 37 in 1994 were eligible to be included in the 2002 survey, and women up to age 32 in 1990 were eligible. We prefer to use the lower bound (age 32) so as to have a consistent age range throughout the period 1990-94. We use age 29 instead of age 32 for the analytic sample in an attempt to facilitate comparison with published statistics that use 5-year age groups.

with birth counts to calculate birth rates. All rates and proportions presented in this paper are weighted using sample weights to produce nationally representative estimates.

As a comparison, we perform similar analyses using planned and unplanned birth rates. Both the 1995 and the 2002 cycles of the NSFG collect contraceptive use histories linked to each pregnancy. For each pregnancy, women are asked if they were using contraception at the time of pregnancy. Women who were not contracepting were then asked if they were trying to become pregnant at the time: “Was the reason you stopped using all methods of birth control because you yourself wanted to become pregnant?” Births for which women answered yes to this question were labeled as planned for the purposes of this analysis; all other births are labeled unplanned. This question serves as a lead-in to the question on pregnancy intentions: Births reported as planned (not using contraception in order to get pregnant) are assumed to be wanted, and the follow up question on wanted then/sooner/later/not at all is only asked for unplanned births. Using this question as a stand-alone measure captures a different dimension of pregnancy attitude from the more detailed question on intentions. As London, Peterson, and Piccinino (1995) discuss, unintendedness captures attitudes regarding a pregnancy whereas planning status is a more direct measure of behavior (contraceptive use). This question is identically worded in the 1995 and 2002 surveys. We use it as a “control” for assessing whether observed measurement differences across the surveys are the result of changes in question wording for pregnancy wantedness, other changes in survey administration, or inherent difficulties in collecting retrospective data on pregnancy wantedness.

The second component of the analysis uses the 2002 survey to calculate statistics on birth intendedness for women age 15-29 during the period 1997-2001. This allows us to assess change

over time using both the 1995 and 2002 surveys for comparison and illustrates the substantive implications of the change in wording between the two surveys.

Lastly, we use regression analyses to test whether the observed differences between surveys in birth intendedness, birth wantedness, and planning status are within the margin of sampling error. For these analyses, we pool data from the 1995 and 2002 surveys and use logistic regression to compare the likelihood of reporting a birth as unwanted (unintended, seriously mistimed) for women in the two surveys (see Swicegood, Morgan, and Rindfuss 1984 for a similar analysis). As a “control,” we also examine the likelihood of reporting a birth as unplanned and use discrete time hazard models to assess the likelihood of reporting any birth in a given month. These models control for age (linear and squared terms), race and ethnicity, and marital status to account for possible differences in sample composition, but are not intended to be substantive analyses of fertility. The primary outcome of interest here is the coefficient for the dummy variable indicating which survey the data were taken from. We do test for interactions between the survey variable and some control variables to assess the degree to which different groups of women responded differently to changes in question wording.

The total sample sizes for the surveys are 10,847 (1995) and 7,643 (2002) women. Table 1 shows the size of the analytic sample for the two surveys, including the unweighted number of births between 1990 and 1994 to women age 15-29, the unweighted number of person-years lived by women age 15-29 between 1990 and 1994, and similar figures for the 2002 NSFG for the period 1997-2001.

Results

Table 2 documents measurement differences between the 1995 and 2002 NSFG. The table includes rates and proportions for unwanted, unintended (unwanted plus mistimed),

seriously mistimed (mistimed by at least two years), and unplanned births. The differences in measured levels of unwanted fertility during the period 1990-1994 are consistent across measures and race and ethnic groups and substantively large. Unwanted births rates are about 4 births per thousand women higher for white women, 6 births per thousand women higher for African American women, and 10 births per thousand women higher for Hispanic women when data is drawn from the 2002 cycle rather than the 1995 cycle. Thus, using the 2002 NSFG results in estimated unwanted birth rates between 30% and 90% higher than estimations using the 1995 NSFG for the same period. A similar pattern is found when examining the proportion of births that are unwanted.

Unintended fertility as a whole (unwanted births plus all mistimed births) is also consistently higher as recorded in the 2002 NSFG compared to the 1995 NSFG (Table 2). The absolute magnitude of the measurement difference in unintended birth rates is similar to the magnitude of the difference for unwanted birth rates. However, because overall levels of unintended fertility are higher than levels of unwanted fertility, the measurement difference is proportionally smaller. For non-Hispanic white women, for example, unintended birth rates are about 4 births per thousand women higher when calculated using the 2002 NSFG than when calculated using the 1995 NSFG. This difference represents a relative increase of more than 15% in unintended fertility compared to an 80% increase in unwanted birth rates (discussed above). Differences in seriously mistimed birth rates as measured in the two surveys are small; where there are differences, they are in the direction of fewer seriously mistimed births reported in 2002 than in 1995. This pattern suggests that the change in question wording may lead to a shift in birth reports from mistimed to unwanted births.

Increased reporting of unwanted births in the 2002 NSFG is consistent with the intended effect of the change in question wording from “at the time you became pregnant” to “right before you became pregnant.” (Recall that the goal of this part of the change in the question wording was to direct women to answer the question in reference to pre-pregnancy ideas rather than feelings that developed during pregnancy and thus reduce underreporting of unwanted and unintended births). The change in wording from “at some time” to “at any time in the future,” which was designed to reduce the misreporting of mistimed births as unwanted, appears to have had little impact. If anything, women in 2002 are more likely to report an unintended birth as unwanted (rather than seriously mistimed) than women in 1995.

It is possible that these differences stem from some difference in sample construction between the 1995 and 2002 cycles or from a difficulty inherent in retrospective measures of unwantedness. However, Table 2 shows that levels of *unplanned* births are not consistently higher as measured in the 2002 survey compared to the 1995 survey. Measured unplanned birth rates are similar for non-Hispanic women. For U.S. born Hispanic women, unplanned birth rates 1990-94 are higher using the 2002 NSFG (67.2 births per thousand women) than using the 1995 NSFG (59.8), but this difference is proportionally much smaller than the difference in unwanted birth rates – 12% higher compared to 90% higher. The high degree of consistency between reports of unplanned births suggests that the inconsistency in reports of unwanted births is particular to the question and not a general problem with retrospective data or a general difference between the surveys.

Measurement differences between the 1995 and 2002 cycles of the NSFG have substantive implications, shown in Table 3. This table includes ratios and rates for unwanted and unintended births, the two indicators most often used to track unintended fertility, and for

seriously mistimed births, a newer measure of unintendedness. Ratios and rates are calculated for the period 1990-1994 using both the 1995 and 2002 surveys and for the period 1997-2001 using the 2002 survey. The difference between the earlier and later periods is calculated first using the two surveys, whose measures are not consistent, and then using only the 2002 cycle for a consistently measured difference. The rightmost sets of columns in the table show absolute and relative difference between the 1990-1994 and 1997-2001 periods using these two approaches.

The apparent difference in unwanted fertility between 1990-1994 and 1997-2001 is striking. When using the 1995 and 2002 NSFG cross-sections to calculate change over time, unwanted birth rates appear to have increased about 90% for non-Hispanic White women, 40% for non-Hispanic Black women, and 130% for Hispanic women, with similar increases in the proportion of births that were unwanted. Unintended birth rates seem fairly stable during the period, but the proportion of births that were unintended show an increase of about 20% for white women and close to 40% for Hispanic women. (Note that the increase in the unintended birth ratio implies a relative decline in intended fertility.) These apparent increases have been reported in the academic literature (e.g., Chandra et al. 2005; Finer and Henshaw 2006) and have inspired renewed policy attention to unintended childbearing (e.g., The National Campaign to Prevent Teen and Unplanned Pregnancy). When internally consistent data from the 2002 NSFG are used to estimate change over time, however, changes in unintended fertility during the 1990s are much more modest. Increases in both unwanted and unintended fertility are large among Hispanic women, even using the internally consistent measure. Among non-Hispanic women, however, unwanted fertility increased less than 10% during the 1990s, and unintended fertility actually declined slightly. Reported change between the 1995 and 2002 NSFG depends on the measurement of indicators and may not reflect true behavioral or attitudinal changes.

Measurement differences between the two surveys are substantively large, but they may be within the normal range of variation expected in survey measurement. To test whether the observed differences are within the margin of sampling error or represent a more substantial difference, we turn to a regression framework. Table 4 shows the results of discrete-time event history analyses using person-months as the unit of analyses and modeling fertility outcomes during the period 1990-1994. Outcomes include unwanted, unintended, and seriously mistimed births, as well as all births and unplanned births for comparison. Control variables (age, marital status, race and ethnicity) are not of substantive interest; results for these variables are not presented.

The first model shows a statistically significant difference between the two surveys in the likelihood of labeling a birth unwanted ($B=0.49$, $p<.001$). The coefficient is positive, indicating that births reported in the 2002 survey are more likely than births from the 1995 survey to be labeled unwanted. That is, women interviewed in 2002 are significantly more likely to report an unwanted birth than women interviewed in the 1995 survey when asked about the same time period and when controlling for basic socio-demographic factors. This result is not unexpected given the large differences in unwanted birth rates shown in Table 2. The small standard error for this coefficient indicates that it is unlikely that a difference of this size can be solely attributed to random sampling differences. In comparison, the coefficient for the difference between the two surveys in the likelihood of reporting an unintended birth is positive, but small and not significantly different from zero. Again, this finding is consistent with the bivariate results showing higher unintended fertility measured in the 2002 survey than the 1995 survey, but a relatively small difference. The third model examines differences in the likelihood of reporting a birth mistimed by more than two years in the 2002 survey and the 1995 survey.

These results show that women in 2002 are significantly less likely to label a birth seriously mistimed, and this difference is larger than would be expected from sampling differences. Taken together, these reports lend further support to the suggestion that the revised question elicits similar overall levels of unintended births, but that unintended births are more likely to be reported as unwanted in 2002 and less likely to be reported as mistimed. The final two models analyze total fertility and unplanned fertility as a “control” to assess whether survey differences extend to all measures of fertility intentionality. There is no statistically significant difference between the two surveys in the likelihood of reporting any birth or labeling a birth as unplanned. These results provide more evidence that differences in unwanted fertility are due to the wording of specific questions rather than general differences in samples, survey administration, or reporting.

It is possible that different groups of women responded differently to changes in question wording. For example, the change in wording from “at some time” to “at any time in the future” was primarily aimed at young women beginning childbearing earlier than expected. Thus, reporting changes in response to this rewording may be larger among young women than among older women. Descriptive results also suggest larger changes in reporting among U.S. born Hispanic women than among non-Hispanic women. To test for these differences, we included interactions between the 2002 survey variable and race-ethnicity and age variables in the models for unwanted and seriously mistimed births, the two outcomes for which there were statistically significant differences between surveys. We tested age-survey interactions modeling age as a continuous variable and as a set of dummy variables for 5-year age groups. The only meaningful and statistically significant interaction was for the 15-19 age group; we display results from a

model containing only this interaction term (complete results available from authors upon request).

Survey variable main effect and interaction terms from these models are shown in Table 5. The interactions between the survey variable and the race-ethnicity variable are not statistically significant in either model. The Hispanic interaction is large in both the unwanted birth model and the seriously mistimed birth model, consistent with descriptive statistics showing differential patterns of change among Hispanic women, but standard errors indicate that these differences are within the range expected from sampling error. The coefficient for the interaction between the survey variable and a dummy variable isolating women age 15-19 is large and statistically significant in the model predicting an unwanted birth, though not in the model for seriously mistimed births. However, this coefficient is positive: that is, the increased likelihood of labeling a birth unwanted among women interviewed in 2002 is *larger* for births to women in their teens than for births to older women. (Recall that age 15-19 is the age of women at the time of the birth, that is, in 1990-94, not at the time of the survey.) This relationship suggests that the change in question wording from “at some time” to “at any time in the future” did not reduce the reporting of unwanted births among young women, and the other change in question wording appears to have had the opposite (and larger) effect.

Conclusions

Measured levels of unwanted fertility in the early 1990s differ substantially depending on whether data from the 1995 NSFG or the 2002 NSFG are used to calculate unwanted births. Compared to women interviewed in 1995, women responding to the 2002 version of the question are more likely to report an unwanted birth and less likely to report a seriously mistimed birth. This change is consistent with a change in question wording designed to focus women on the

time before the pregnancy rather than during or after the pregnancy. Levels of other fertility outcomes, such as births and unplanned births, do not differ across the two surveys. We therefore attribute measurement differences in unwanted births to changes between 1995 and 2002 in the wording of the question used to elicit information about whether births were wanted. Variation in measurement does not appear to result from differences between the two samples or more generalized problems with the reporting of pregnancy intentions.

This measurement difference has substantive implications. The apparent rapid increase in unwanted fertility has generated substantial academic and policy interest. This difference, however, is more apparent than real. Unwanted birth rates in the United States are high, and so merit attention, but excessive concern over *increasing* unwantedness is probably misplaced. Measurement differences have implications for research on the changes in the causes or consequences of unintended fertility over time as well, especially given that reactions to the change in question wording vary by age. For example, the large increase in reporting of unwanted births among young women produces an apparent disproportionate increase in unwanted fertility in young women. When analyzing change over time based on the 1995 and 2002 NSFG, care must be taken to recognize the impact of survey changes on reported statistics.

The measurable impact of a seemingly minor change in question wording (from “at the time you became pregnant” to “right before you became pregnant”) indicates the sensitivity of reporting on pregnancy intentions to survey construction and context. Given this sensitivity, it is surprising that a second change in question wording (from “at some time” to “at any time in the future”) did not have a measurable effect on the reporting of mistimed vs. unwanted births. In fact, the prospective targets of this revision – young women having births long before desired – showed the largest changes in reporting in the opposite direction from that expected. Clearly,

more exploration of how young women interpret and respond to questions on fertility intentions is needed. It is possible, for instance, that since most teenagers are simply not thinking about childbearing at all, changing the time referent has little effect.

The concept of unintended fertility arose during a time when effective contraceptives were relatively new and when most unintended births were “number failures” occurring to married women who had already reached their desired parity (Klerman 2000). The rocky transition of this concept to a context where many unintended births are non-marital births occurring at the beginning of women’s childbearing years is widely recognized and well-documented (e.g., Klerman 2000; Klerman and Pulley 1999; Luker 1999; Peterson and Mosher 1999; Santelli et al. 2003; Zabin 1999). Measuring unintended fertility in the current context requires a balance between consistency with past measures and recognition of the new demands imposed by the shift toward low-parity unintended births at young ages. The mixed success of the changes made to the 2002 National Survey of Family Growth questions on intendedness points to the difficulty involved with both of these tasks, and the necessity of further research and exploration into women’s understanding of fertility intentions as well as survey measurement of these intentions.

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Table 1: Sample sizes

	1990-1994: 1995 NSFG	1990-1994: 2002 NSFG	1997-2001: 2002 NSFG
Births to women age 15-29	2378	1529	1542
Person-years lived by women age 15-29	23121	16366	16719

Table 2: Unwanted, unintended, and unplanned fertility, women age 15-29, 1990-1994, measured using 1995 and 2002 NSFG

		1990-94: 1995	1990-94: 2002	Difference between survey reports
Unwanted birth rates				
	Non-Hispanic White	4.7	8.6	3.9
	Non-Hispanic Black	20.7	26.5	5.8
	US born Hispanic	10.8	20.6	9.8
Proportion of births unwanted				
	Non-Hispanic White	0.06	0.11	0.05
	Non-Hispanic Black	0.18	0.25	0.07
	US born Hispanic	0.10	0.16	0.06
Unintended birth rates				
	Non-Hispanic White	26.4	30.4	4.0
	Non-Hispanic Black	61.2	63.5	2.3
	US born Hispanic	41.5	52.6	11.1
Proportion of births unintended				
	Non-Hispanic White	0.31	0.38	0.07
	Non-Hispanic Black	0.55	0.59	0.04
	US born Hispanic	0.39	0.40	0.01
Seriously mistimed birth rates				
	Non-Hispanic White	13.3	13.1	-0.2
	Non-Hispanic Black	31.1	27.2	-3.8
	US born Hispanic	21.1	19.2	-1.9
Proportion of births seriously mistimed				
	Non-Hispanic White	0.16	0.16	0.0
	Non-Hispanic Black	0.28	0.25	0.0
	US born Hispanic	0.20	0.14	-0.1
Unplanned birth rates				
	Non-Hispanic White	41.4	41.5	0.1
	Non-Hispanic Black	81.9	78.9	-3.0
	US born Hispanic	59.8	67.2	7.4
Proportion of births unplanned				
	Non-Hispanic White	0.49	0.52	0.03
	Non-Hispanic Black	0.73	0.73	0.0
	US born Hispanic	0.56	0.51	-0.05

Source: Authors' calculations, 1995 and 2002 NSFG. All figures are weighted. Birth rates are annual births per thousand women.

Table 3: Change over time in unwanted and unintended fertility, women age 15-29

	Level in 1990-1994		Level in 1997-2001	Absolute change 1990-94 to 1997-2001		Percent change 1990-94 to 1997-2001	
	Using 1995	Using 2002	Using 2002	Using 1995 and 2002	Using 2002 only	Using 1995 and 2002	Using 2002 only
Unwanted birth rates							
Non-Hispanic White	4.7	8.6	9.0	4.3	0.5	91.6	5.4
Non-Hispanic Black	20.7	26.5	29.1	8.3	2.5	40.2	9.6
US born Hispanic	10.8	20.6	24.8	14.0	4.2	130.3	20.5
Proportion of births unwanted							
Non-Hispanic White	0.06	0.11	0.12	0.06	0.01	112.6	9.6
Non-Hispanic Black	0.18	0.25	0.26	0.08	0.02	41.8	6.4
US born Hispanic	0.10	0.16	0.23	0.12	0.07	123.4	45.4
Seriously mistimed birth rates							
Non-Hispanic White	13.3	13.1	12.3	-1.0	-0.8	-7.5	-6.3
Non-Hispanic Black	31.1	27.2	26.0	-5.0	-1.2	-16.1	-4.4
US born Hispanic	21.1	19.2	23.9	2.8	4.7	13.3	24.7
Proportion of births seriously mistimed							
Non-Hispanic White	0.16	0.16	0.16	0.00	0.00	2.6	-2.6
Non-Hispanic Black	0.28	0.25	0.23	-0.04	-0.02	-15.2	-7.2
US born Hispanic	0.20	0.14	0.22	0.02	0.07	9.9	50.5
Unintended birth rates							
Non-Hispanic White	26.44	30.40	28.45	2.0	-1.9	7.6	-6.4
Non-Hispanic Black	61.19	63.50	62.95	1.8	-0.5	2.9	-0.9
US born Hispanic	41.53	52.59	58.78	17.2	6.2	41.5	11.8
Proportion of births unintended							
Non-Hispanic White	0.31	0.38	0.37	0.06	-0.01	19.4	-2.7
Non-Hispanic Black	0.55	0.59	0.57	0.02	-0.02	4.0	-3.8
US born Hispanic	0.39	0.40	0.53	0.15	0.14	37.3	34.8

Source: Authors' calculations, 1995 and 2002 NSFG. All figures are weighted. Birth rates are annual births per thousand women.

Table 4: Results of regression models for fertility outcomes

Outcome:	2002 survey vs. 1995 survey			N
	B	SE		
Unwanted birth	0.49	0.10	***	4020 births
Unintended birth	0.12	0.07		4020 births
Seriously mistimed birth	-0.22	0.09	*	4020 births
Unplanned birth	-0.08	0.07		4020 births
Any birth	-0.04	0.03		479556 person-months

Source: 1995 and 2002 NSFG. Women age 15-29 during the period 1990-1994. *: $p < .05$; ***: $p < .001$. Models control for age in years, age squared, race and Hispanic origin, and relationship status.

Table 5: Results of regression models with interactions

	Unwanted birth			Seriously mistimed birth		
	B	SE		B	SE	
Race interaction						
2002 survey main effect	0.48	0.17	**	-0.08	0.13	
2002 x non-Hispanic black	-0.09	0.22		-0.23	0.20	
2002 x U.S. born Hispanic	0.32	0.29		-0.33	0.26	
Age interaction						
2002 survey main effect	0.34	0.11	**	-0.22	0.11	*
2002 x age 15-19	0.56	0.19	**	-0.01	0.17	

Source: 1995 and 2002 NSFG. N=4020 births for all models. Women age 15-29 during the period 1990-1994. *: p<.05; **: p<.01. Models control for age in years, age squared, race and Hispanic origin, and relationship status.