FORUM

Contraceptive Failure and Unintended Pregnancy

A Reminder That Human Behavior Frequently Refuses To Conform to Models Created by Researchers

By Kristin C. Luker

An investment company headed by Nobel laureates recently went so spectacularly into debt that the government had to rescue it, lest its failure threaten the entire global banking system. Explaining the situation, an observer noted that a series of unusual events had occurred. "The fault isn't with the models," he insisted.[1] This is a useful reminder to all of us—researchers, clinicians and politicians—to be constantly aware of how often human behavior refuses to conform to our models.

The results of Trussell, Vaughan and Stanford likewise make clear that we should use our models with caution. As they point out, both "unintended pregnancies" and "contraceptive failures"—two touchstones of contemporary policy initiatives—are more complex than they appear at first glance.

Part of the problem resides in the history of the instrument used to measure unintended pregnancy. The series of questions used to measure intention status in the National Survey of Family Growth (NSFG) grew out of earlier knowledge, attitude and practice surveys that had been systematically refined in the period just after World War II. Given the demographic circumstances of the era, notably the largely unanticipated baby boom, these items were originally intended to measure "surplus" fertility, or the number of children a couple had in excess of planned family size.

Over the last quarter-century, however, the fertility at issue in American public policy has not been that of the married mother in her 30s and 40s who produces more children than planned, but that of the young woman who has a child before she has planned to. The need to preserve comparability between various cycles of the NSFG means that the fertility questions in the most recent survey, which have undergone extensive revision, bear the marks of having once measured a very different part of the family-building cycle. Meanwhile, the shift in political and policy interest away from the end toward the beginning of the cycle means that the NSFG is measuring a much more complicated social reality. For an earlier generation of women (and men), these surveys did indeed measure what they were supposed to, namely *fertility,* or how many children a couple actually wanted. But for an increasing number of American women (and men), something entirely different is at stake—not fertility, but *motherhood* (or fatherhood, as the case may be).

To the extent that more and more women are contemplating, not "excess" births at the end of the family-building cycle, but unexpected pregnancies at the beginning, what is really being tapped is the willingness to enter a new social role, not how extended that role should be.

Drawing on the work of decision theorists, I submit that the decision whether or not to be a parent is a very different kind of decision—a threshold decision—and touches on a much more complicated decision tree than the decision to have a completed family size of four or five children.[2] Other events in the larger social world have conspired to further complicate this decision. As parenthood becomes increasingly severed from marriage in all industrialized countries, deciding about a pregnancy means a decision not only as to whether one wants to become a parent, but whether one wants to become a parent with a particular partner inside or outside marriage.[3] In decision-making terms, what has happened is that now both parties must decide whether they want to continue a pregnancy or wait for a more promising situation to come along, however that is defined.

Add to these issues the fact that the women and men coming to the end of their reproductive lives at the close of this century have watched the fundamental status of pregnancy and birth change before their very eyes. Until 1960, the year in which the contraceptive pill was approved for general use in the United States, every sexually active person lived continually with the possibility of becoming pregnant. (As an indicator of this revolution's enormity, witness the fact that "the pill" is the only pharmaceutical development in history to which we can refer generically: "the" pill, as if there were only one.) A few privileged and skillful people could more or less control their fertility, but even they—and the society in which they lived—did not view this power as a given but as luck.

For the baby boomers reaching late middle age, this world changed almost overnight: By 1965, just five years after its introduction, the pill had become the most commonly used contraceptive among married couples.[4] Truly effective contraception, backed up by legally available abortion, meant that for the first time in history, people had to decide actively whether to have a child, rather than passively let nature take its course.

While this development surely affected women who had already decided to be mothers and needed help in limiting their family size, its most profound impact was on a generation of women now permitted to decide if and when they would become mothers. The decision was given unusual salience in that it occurred in the context of changing roles for women, growing concern about overpopulation and shifting perceptions of gender-assigned responsibilities for the practice—and success—of contraception.[5]

What Trussell and his colleagues have detected in the NSFG is a structural shift in the meaning of sexual and reproductive choices in the lives of an increasing number of Americans. More and more people are faced with decisions, not about "fertility," but about motherhood (and parenthood more

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generally) in a social and political climate in which motherhood provokes antagonistic political battles about "family values."

Layered atop normal human ambivalence about sex, pregnancy and childbearing is the reality that our cultural, social and political structures have not caught up with the twin revolutions that the pill and the most recent wave of the women's movement have ushered in. What are the rules now? What does it mean if a couple knowingly have sex without using a contraceptive? Are they signaling commitment or carelessness? How do people use potential parenthood to test themselves and their relationships?

Given the profundity of the revolution in intimate life, and the sheer scope of social change brought about by the unprecedented control of conception, it is not surprising that Trussell, Vaughan and Stanford have found that a substantial number of contraceptive "accidents" may have been something else. Becoming "accidentally" pregnant permits people to duck the onerous responsibility of having to *decide* whether to enter into parenthood, and to do so in the only country in the developed world that permits people to become parents with virtually nothing in the way of social support.

Understanding better the consequences and meaning of the phenomenon documented by Trussell and his colleagues is one of our most urgent research tasks. Indicators such as our abortion rate and our rate of "unintended"pregnancy make clear that choices about parenthood are problem-fraught in this country. We must learn more about how these processes play out in the intimate lives of men and women and in the culture as a whole. If we do not, we will not only have to live with the highest rate of contraceptive "accidents" in the industrialized world, we will also continually face political movements that promise to resolve the complexities involved by turning the clock back to what they see as simpler times.[6]

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Pregnancy Intentions May Not Be a Useful Measure For Research on Maternal and Child Health Outcomes

By Marjorie R. Sable

The findings of Trussell, Vaughan and Stanford raise serious questions for public health researchers who are seeking information about factors that affect maternal and child health outcomes. In trying to understand how women's pregnancy attitudes affect their well-being and that of their children, we have relied on measures of intention status as a proxy for feelings about pregnancy. Studies have linked unintended pregnancy to behaviors such as inadequate use of prenatal care or smoking and drinking during pregnancy and to negative birth outcomes such as low birthweight.[1] Yet if one-quarter of women with contraceptive failures classified as unintended pregnancies are happy or very happy to be pregnant, we may need to consider what survey questions on pregnancy intention are actually measuring, and whether the responses provide a useful proxy for pregnancy attitudes.

Several issues undermine the validity of intendedness as it is currently measured. First is the recall bias implicit in retrospective questions about intention. Once a woman has a baby, she may be more likely to say that the pregnancy occurred at the right time, regardless of how she felt when she became pregnant. And perhaps, in retrospect, it did occur at the right time, even though the conception may not have been intended. Many couples with contraceptive failures can probably relate to thinking, "What a good time to have a baby."

Second, because pregnancy intention involves human emotional and psychological factors, it is an extremely complex concept. Contraceptive failure is due in large part to failure to use a method consistently or effectively, and contraceptive risk-taking may reflect ambivalence about becoming pregnant. For example, a woman may unconsciously wish to become pregnant to validate her sexuality or to secure a relationship commitment from her partner.[2] Women's ambivalence about pregnancy and the unconscious wish to become pregnant—even if one doesn't really want a baby—are powerful forces that complicate the whole issue of intendedness.

The fact that two people are involved adds to this complexity. The reasons couples practice contraception when it is a good time to have a baby are too complicated to examine here, but the partners may have different views on timing. Perhaps contraceptive use reflects the man's desire to prevent pregnancy, while the woman surveyed feels the pregnancy occurred "at about the right time." Further research is warranted on couple concordance in contraceptive knowledge, attitudes and practice, including how the relative power dynamics of the relationship affect couples' contraceptive practice and pregnancy decision-making.

Discrepancies between women's stated and actual contraceptive practice also complicate the issue of intention status. As a counselor in an abortion clinic in the 1970s, I noted that most patients stated that they had been practicing contraception when they became pregnant. However, upon questioning, they usually revealed that they had not always been effective contraceptive users. Ineffective use ranged from "forgetting" to put in a diaphragm, missing one or more pills or not taking pills at the same time each day to throwing out the pills because a woman was mad at her boyfriend or because they had broken up. Because these women were terminating their pregnancies, one could be fairly confident that the pregnancies were unwanted—but were they unintended?

The issue of mistimed versus unwanted pregnancy, as measured in the National Survey of Family Growth (NSFG) and other national surveys, presents yet another problem. Unintended pregnancies are those classified as mistimed or unwanted. A pregnancy is categorized as mistimed if the

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woman said that she did not want a pregnancy at that time but wanted a baby at some time in the future. Pregnancies are considered unwanted if the woman said she did not want to become pregnant at that time or at any time in the future. So, the pregnancy of a young, unmarried woman having an abortion would be classified as being mistimed (but wanted) if she said she hoped to marry and have children someday. On the other hand, an accidental pregnancy to an older, married women who considered her family complete would be classified as unwanted. In fact, the opposite may be true: The young woman's "mistimed" pregnancy may truly be unwanted, while the older woman's "unwanted" pregnancy may be welcomed and carried to term.

In research, we attempt to simplify complex issues in order to quantify them. However, intendedness may be too complex to quantify and thus measure accurately. Perhaps we should drop this variable from public health research altogether, and focus instead on factors that more accurately define the issues of concern—unhappiness, ambivalence and pregnancy denial.

In 1995, the NSFG for the first time included a 10-point scale measuring the degree of happiness that a woman felt about being pregnant, as well as questions designed to measure pregnancy ambivalence. Piccinino and Peterson found consistency between the attitudinal scales and the traditional measure.[3] In my own work, however, I have found that factors such as unhappiness about being pregnant and pregnancy denial were associated with use of prenatal care and low birth weight, while the traditional measure was not.[4] Pregnancy denial, which has been the most robust predictor of inadequate prenatal care and low birthweight in my research, is also included in the pregnancy ambivalence measure in the latest NSFG.

Trussell, Vaughan and Stanford's findings add to the growing body of literature that challenges the usefulness of pregnancy intendedness as a measure for understanding public health outcomes. The National Center for Health Statistics has taken an important step by adding questions designed to measure pregnancy attitudes and ambivalence to the 1995 NSFG. In seeking to identify the conditions that lead to outcomes such as abortion, lack of prenatal care, substance abuse, low birth weight, lack of infant attachment, low educational attainment, poverty and violence, it makes sense to use those questions to focus specifically on women with negative attitudes toward their pregnancy, rather than on those with a pregnancy that is simply unintended.

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Ambivalent Feelings About Parenthood May Lead To Inconsistent Contraceptive Use—and Pregnancy

By Laurie Schwab Zabin

During the last several decades, the concept of pregnancy intention has been used in many different research endeavors—to estimate "unmet need" for contraception, to make population projections, to examine couples' decision-making processes, to measure the extent to which couples successfully regulate their fertility, to explain women's contraceptive or sexual behaviors, to examine their pregnancy-related behaviors (and thus the outcomes for their infants), and even to explore the relative well-being of their intended and unintended children in later life. As different as these objectives may be, intention has been measured with a relatively small number of items over the years. The questions used evolved from items on ideal family size and from the simple "Do you want to have any (more) children?" to scaled and multiple measures of the strength of the fertility intention.

Because the most commonly used items can hardly be described as serious psychometric measures, it is hardly surprising that, even when a significant correlation is found between intention and behavior, there is generally a fairly large subset of women among whom that correlation is not observed. Moreover, the relationship between fertility intention and childbearing varies by stage of demographic transition and by societal context. Researchers probably use the term "unintended" rather than "unplanned" because intention is perceived as a more universal concept than consciously planned conception. But it is quite possible that, in the United States today, many respondents think "planning" when they are asked questions on intention. At the very least, such seeming contradictions as those reported by Trussell, Vaughan and Stanford suggest that there is not merely a range from unintended to intended, but a continuum from truly unintended, through unplanned, to intended and, finally, deliberately planned. Whereas even the concept of childbearing intentions is foreign to a traditional, more fatalistic society that does not practice fertility control, some Americans may describe a child as intended even when its conception was not consciously planned.

Demographers noted in the 1980s that measures of family size intentions were most useful in the context of stable marriage and infrequent nonmarital conception. In a society in which one-third of births—and an even greater proportion of pregnancies—occur out of wedlock, changes in the sexual dyad can have a profound effect on fertility desires, not only in terms of timing but also in terms of ideal family size. Because these dyads change—and because even marriage is often perceived as unstable—many old assumptions relative to fertility motivation are no longer relevant.

For example, the motivation to stop childbearing has commonly been assumed to be stronger than the motivation to postpone it, but the commitment of some young, single women to avoid premarital pregnancy may be more intense than the expressed inclination of some married women to stop at two. Similarly, young women who expect to marry at some time in the future may place greater importance on avoiding pregnancy with a casual partner than do women in simi-

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lar alliances who do not foresee marriage at all. That scenario may explain why women in disadvantaged and unstable environments often see their pregnancies not as unintended (as the researcher expects), but as intended.

The relationship between fertility intention and childbearing—and the link between fertility intention and contraceptive use—are strongly affected by other, independent attitudes, such as the attitude toward contraception itself. Therefore, I would suggest that measures of intention have been used to predict what can only be predicted in the presence of cogent measures of contraceptive attitudes, and that the data available on the intention status of births in the United States today may not represent as serious a failure in contraceptive practice as is often supposed. Rather, they may tell us that timing intentions are not compelling. When childbearing is related more to social relationships than to economic necessity, as may be the case today, its timing within the limits of small family size may not be salient.

Knowing women's family size preferences is not enough; we need to understand their views, if any, on contraception. Thus, the difference between present and ideal family size does not truly describe unmet need; even if *we* believe that women who know nothing of contraception, or know of it and reject it, have a need for family planning, the measurement would more closely reflect demand if it included an assessment of *women's* attitudes on the subject. Research has demonstrated that, even when a young woman's intention to avoid pregnancy is unequivocal, her attitude toward contraception has to be absolutely positive if she is not to conceive.[1] American women's attitudes toward and use of birth control methods clearly do not indicate such positive attitudes, and it is only when we care deeply about an outcome that we are willing to assume the costs of achieving it.

American women seem to be telling us that their timing intentions are often weak; perhaps we should believe them. We should believe them because, regardless of how ambivalent they feel about avoiding conception, and however they may feel about contraception, Americans are not having large families. They may not use contraceptive methods with the regularity or effectiveness with which such methods are used in other industrialized countries, but they stop having children after a relatively small number of births. Of course, it may be argued that, for the majority, the desire to stop childbearing does not lead to effective use of reversible contraceptives; rather, many men and women successfully limit family size by recourse to sterilization. Causality may indeed be expressed in reverse: Couples opt for sterilization because they eventually *do* have an unequivocal desire to avoid conception. And those who are not sterilized appear to handle contraception well enough to avoid having large families.

Thus, the concept of ambivalence toward both conception and contraception is of central importance in our understanding of contraceptive use. Ambivalence toward—often downright dislike of—birth control methods is no doubt implicated in many of the cases in which an "unintended" conception occurs. Moreover, the judgmental term *failure* is probably inappropriate in a large proportion of these cases. The evidence that American couples stop having children when they do, that they do not fail to control family size, should make us question whether "failure" really explains the lack of a strong connection between the expressed desire to avoid or postpone a pregnancy and its effective prevention. That lack may perhaps be better explained by the limited utility of the concept, on the one hand, and, on the other, by the weakness of couples' timing intentions.

If we follow the logic of this thinking, it may shed some light on the problem of adolescent childbearing, which has been of such public concern in this country. If, within the limits of a relatively small family, Americans are willing to allow some flexibility in both the ultimate number of children and the timing of their births, then there is probably not the powerful, almost universal relationship between intention and behavior, between the sex act and contraception, that one would hope for in a true "contraceptive society."

Perhaps the lack of such a relationship implies that, despite our high contraceptive prevalence rate, we do not value children enough to believe that unprotected sex should occur only when two persons share a positive and conscious desire for parenthood. Small wonder that this belief has not been transmitted to the young. Because most adults believe that the young should delay childbearing, we expect adolescents to demonstrate a level of cautious, effective contraceptive use well beyond that of large proportions of adult couples—a consummation devoutly to be wished but not always achieved. Perhaps only when childbearing is perceived by the entire society as sufficiently important to occur only in the presence of an unequivocal desire for parenthood can we expect that ideal to be adopted by the youngest couples among us.

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Intended Pregnancies and Unintended Pregnancies: Distinct Categories or Opposite Ends of a Continuum?

By Christine A. Bachrach and Susan Newcomer

If we assume that there is a distinct and identifiable entity known as an "unintended pregnancy," we need to ask whether women's retrospective reports provide accurate and unbiased information on their experience with this phenomenon. A growing body of evidence suggests not. A study using the National Longitudinal Survey of Youth to examine the impact of variations in the timing of asking a question about pregnancy intendedness found strong evidence of bias: Asking the question after the birth resulted in a higher proportion of the pregnancies being deemed wanted than when the question was asked during the pregnancy.[1] Other research based on a sample of middle-class couples also demonstrated that reports of pregnancy wantedness become more positive between conception and mid-pregnancy and between mid-pregnancy and six months after the birth.[2]

One reason for this bias may be that a woman feels increased pressure to give a socially desirable response, or may genuinely change her mind, as a fetus develops and, finally, a child is born. This problem suggests three potential courses of action. First, we could combine what we learn from traditional cross-sectional studies with research that measures intendedness and wantedness prospectively,

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perhaps even embedding a prospective component in a cross-sectional study. Second, we could continue to seek improvements in the measurement value of the retrospectively obtained information, perhaps by changing question wording or by prompting respondents to recall in greater detail how they felt when they discovered they were pregnant. Third, analysts could develop models of the predictors of reporting bias (e.g., time since conception) and use these models to control for error in analyses using retrospective data.

Even if we deal successfully with the problem of retrospective reporting bias, however, we must still address another basic issue. For decades, demographers have spoken of unintended pregnancy as if it were a distinct phenomenon, different from intended pregnancy in the way a blue chair is different from a red chair. However, the research evidence clearly demonstrates that the "intendedness" of a pregnancy (as measured by the NSFG) is a continuum involving at least two dimensions—intentionality or planning plus an affective dimension expressing happiness or dismay over being pregnant. Focus-group research suggests that "wanting" a birth has to do with one's community, one's partner and one's values about childbearing, while planning (closely related to intending) a birth has to do with one's preparation, life goals and education.[3] This study and other research have further shown that the idea of planning a pregnancy does not fit into the way some individuals see their lives.

With regard to the affective dimension, the positive and negative extremes may not be located on the same continuum; that is, positive and negative feelings may co-exist,[4] thus producing ambivalence. At the ends of these continua, we see "wantedness" and "unwantedness" concretely: Contrast the many U.S. conceptions that end in abortion with the pregnancies achieved by infertile couples through expensive investments in assisted reproductive technologies. However, given the complexity of the underlying phenomenon of "unintended pregnancy," we agree that the measure traditionally used by our field is a case of misplaced concreteness and a failure to differentiate theoretically distinct dimensions.

There are similar problems of nonspecificity with the application of the term "contraceptive failure" to the failure rates calculated from NSFG data. As Trussell, Vaughan and Stanford observe, a pregnancy may be considered to result from a "contraceptive failure" whether or not the woman was actually physically using her method during the act of intercourse that resulted in the pregnancy. Thus, a pregnancy that occurs when a woman skips three oral contraceptive pills, neglects to use a condom "just this once" or has sex four months after her last DMPA injection can be counted as a contraceptive failure. Researchers conducting clinical efficacy trials have usually been careful to distinguish "use-effectiveness" estimates from "method-effectiveness" estimates. The distinction between these two is a reminder of the fact that users do fail, often because of the ambivalence noted above.

Demographers are not the first to overlay categorical (either/or) measurement on a continuous variable: We speak of child abuse, poverty and youth, even though the cutoffs we use to define these terms are at some level arbitrary and varying. We do this because the categories are useful, indeed necessary, to communicate effectively about the phenomenon in which we are interested. The trick is to define cutoffs that are well informed by common sense and science, and, if we are monitoring trends, to assure that the measures are applied consistently across the years. Similarly, using measures that combine distinct but related dimensions can be helpful in providing a summary indicator of an important outcome. The research to date reassures us that the intentionality and affective dimensions of the "intendedness" measure are related—in fact, strongly related. We think this justifies continued use of the traditional measure.

At the same time, the rich and growing body of research that helps us to "unpack" and better understand the dimensions of pregnancy planning and pregnancy wantedness provides important lessons for both service providers and researchers. Service providers should be encouraged to listen more carefully to women's affect as they counsel about birth control choice and use. Researchers should continue their efforts to expand approaches to these concepts and to develop improved ways of measuring them in future studies, both sample surveys and ethnographic studies. The National Center for Health Statistics began this process in the 1995 NSFG, and will surely continue it in their 2001 survey.

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Options for Measuring Unintended Pregnancy In Cycle 6 of the National Survey of Family Growth

By Linda S. Peterson and William D. Mosher

The intended-mistimed-unwanted classification of pregnancies was developed in analyses of fertility surveys conducted in the 1950s and 1960s. Those surveys were restricted to samples of married women. The traditional measures of intendedness were based on a model in which a married couple either selects a family-size target at marriage and then pursues it, or revises it periodically, but at any given time agrees on what the target is (one child, two children, three children, etc.).

This framework works well for most married couples, but it is less plausible for unmarried teenagers, unmarried adults and those who suspect that they are unable to conceive. For these latter groups, a woman's answers may vary from what we would expect from the simple schema above—because of the partner she has at a particular time, whether she intends or wants to marry her current partner, how much she knows about her fecundity or that of her partner, and other factors.

The last three cycles of the NSFG (1982, 1988 and 1995) have collected data from women of all marital statuses, including unmarried teenagers and adults, and from oversamples of minorities. The

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information collected has been kept consistent throughout NSFG history to make it possible to monitor trends in unintended pregnancy. The growing coverage of NSFG surveys, however, is one of the principal reasons why several new measures of pregnancy wantedness were included in the 1995 survey.[1] One of the new measures, the "happiness scale" used by Trussell, Vaughan and Stanford, essentially turns the intended-mistimed-unwanted categories into a continuous variable.

As part of a program of methodological research for Cycle 6 (in 2001), NSFG staff contracted with researchers at the University of Alabama at Birmingham to review the literature, conduct cognitive research and develop recommendations for improved measurement of unintended pregnancy and its explanatory factors.[2] A number of the innovations they suggested will be pretested for Cycle 6.

Substantive Additions

We need additional data related to unintended pregnancy to help explain why individuals who claim to be practicing contraception are still becoming pregnant, and why individuals who claim not to want to become pregnant are not using a method. We know who is at highest risk for unintended pregnancy, but we do not know why they are unable or unwilling to prevent or delay pregnancy.

• *Motivation and desire to avoid pregnancy.* Several ways of measuring these concepts have been suggested. For example, items developed by Miller[3] include a 10-point scale on which the respondent is asked to rate how hard she tried to prevent pregnancy at the time she conceived a specific pregnancy. To assess the strength of her desire not to conceive, she is asked to rate (on a 10-point scale) how much she wanted to avoid a pregnancy. She is asked similar questions about her partner.

Zabin has used a question about a woman's feelings about having a baby with her partner at that time to get at why a pregnancy might be reported as occurring "too soon."[4] For example, the answer to the question, "Right before you became pregnant with the pregnancy that ended in (MO/YR), did you think you might ever want to have a baby with that partner?" may show to what degree feelings about a particular partner play a role in the classification of pregnancies as unintended.

• *Ambivalence*. The Cycle 5 questionnaire contained five paired statements that were used to assess the degree of ambivalence felt by young women about getting pregnant right before each of their recent pregnancies. Analysis of the consistency of responses across pairs within the series, and of the series with the "wantedness" and "happiness to be pregnant" measures, showed that three of the five pairs performed consistently.[5] A possible replacement for these items is a series developed by Stevens-Simon,[6] in which the respondent is asked which statements most accurately represent her feelings right before she got pregnant. For example, "You felt that having a baby would get in the way of your plans for the future, or would fit into your plans for the future." The response categories are "get in the way," "fit into," "both"and "neither" (if offered). Additional statements about the family being pleased, feeling close to the partner, fitting in with female friends, adding something special to her life, and feeling good about herself would be coded in a similar manner.

• *Reasons for unintended pregnancy*. Questions about reasons why a woman conceived a pregnancy she did not want at the time would add explanatory power to the survey. Klerman and Pulley have developed items to identify such reasons as method failure, improper method use, nonuse of a method due to not expecting to have sex, and nonuse for reasons related to the partner and conditions of intercourse.[7]

Clarifications

To address concerns about possible recall bias in women's retrospective reports about their pregnancy attitudes, the introduction at the beginning of the "intendedness" series could state that we are interested in knowing about a woman's feelings *right before she became pregnant*, not her feelings during the pregnancy or after the birth.

In Cycle 5, the second "intendedness" question was worded as follows: "At the time you became pregnant, did you yourself actually want to have (a/another) baby at some time?" Based on cognitive research, Klerman and Pulley recommend testing the following wording to clarify the time periods of interest: "Right before you became pregnant, did you yourself ever want to have (a/another) baby at any time in your life?"

In addition, separating the NSFG "intendedness" questions from the questions on contraceptive use might be useful.[8] Having women report contraceptive use in the month of conception right before asking them their intentions about pregnancy could affect the latter responses. For example, if a respondent has just reported that she was using a contraceptive method in the month of conception, she may report that her intended pregnancy was unintended because she wants to appear rational in the eyes of the interviewer.

Simplifications

In Cycle 5, the focus was on a woman's method use during the entire period between the previous pregnancy or first intercourse and the pregnancy of interest. For Cycle 6, we may test a question focusing on the method or methods, if any, used in the month of conception. That is, we may test "Before you became pregnant with your (NTH) pregnancy, which ended in (MO/YR), had you stopped using all methods of birth control?" against "At the time you became pregnant with your (NTH) pregnancy, which ended in (MO/YR), were you as a couple using any methods of contraception?" In addition, the question "Was the reason you stopped using all methods of birth control because you yourself wanted to become pregnant?" might be simplified to "Did you, yourself, want to become pregnant at the time you did?"

The desire to preserve the long-term time series to monitor trends remains strong. Therefore, the impact of question changes on responses will need to be assessed.

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