Design and Implementation of an Online Weekly Survey to Study Unintended Pregnancies: Preliminary Results*

Jennifer S. Barber
University of Michigan

Yasamin Kusunoki
University of Michigan

Heather Gatny
University of Michigan

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Abstract

This paper describes a new and innovative approach to measuring relationships, contraception, and unintended pregnancy among young women. The ongoing project begins with a 60-minute in-person interview about family background and current relationship characteristics. At the conclusion of the interview, respondents are enrolled in an ongoing journal, which consists of a 5-minute survey via web or phone, and occurs weekly for 2.5 years. We have enrolled over 1000 young women in the study and have experienced excellent baseline response rates and high journal participation rates. The current paper describes the study and its design strengths and weaknesses. We also describe the young women in our sample and explore the likelihood of reporting a pregnancy during the study period thus far. The results presented throughout the paper are preliminary as data collection ends January 2012.

Introduction

We are conducting new research to investigate unintended pregnancies during the transition to adulthood. Investigation of these issues requires detailed, dynamic measures of relationships (including sexual behavior), contraceptive use, activities that compete with childbearing (including school and work), and community context. Our investigation also requires detailed, dynamic measures of beliefs, expectations, and willingness to engage in those and related behaviors. Available data resources for studying unintended pregnancy suffer from fundamental weaknesses, particularly retrospective reporting error. We have designed a new approach, a weekly online journal-based survey, to collect prospective measures to study these events. Our approach will provide new estimates of the prevalence of unintended pregnancy among young adults, new insights into the contexts producing unintended pregnancies among young adults, and new measurement strategies.

Our overarching question for this project asks how prevalent unintended pregnancy is during the transition to adulthood, and why. To advance our understanding of the processes leading to unintended pregnancy during the transition to adulthood, this project has four specific aims: (1) collect new detailed, dynamic measures of unintended pregnancy; (2) collect new detailed, dynamic measures of behavioral, attitudinal, and community context aspects of relationships (including sexual behavior), contraceptive use, pregnancy, and activities that compete with childbearing; (3) provide alternative estimates of the prevalence of unintended pregnancy based on new, prospective measurement strategies and directly compare these new prevalence estimates to those based on national studies; and (4) determine which attitudinal, behavioral, and contextual aspects of relationships, contraceptive use, and activities that compete with childbearing increase unintended pregnancy rates during the transition to adulthood. The

new approach we employ is made possible by recent advances in computer assisted interviewing technologies that facilitate the collection of detailed weekly journal-based measures. This strategy allows us to document detailed dynamics over time in key domains of social life that are likely to change rapidly in early adulthood.

To meet the specific aims of our research, we are conducting a large-scale mixed-method data collection project with a cohort of approximately 1,000 18- and 19-year old women in a representative county in Michigan. After a 60-minute in-person baseline interview, the women are enrolled in a weekly journal-based survey for 2.5 years. The journal consists of a 5-minute web- or phone-based interview focused on the past week's experiences with contraceptive use and other behaviors, as well as prospective pregnancy intentions. The objective of the current paper is to describe the study and its design strengths and weaknesses. We also provide an early description of the young women in our sample and present preliminary results of the likelihood of reporting a pregnancy during the study period thus far.

Background and Significance

Although the United States experienced declines in unintended childbearing in the 1970s and early 1980s, levels have recently risen, and the most recent national estimates indicate that approximately 35% of live births from 1997-2002 were unintended at the time of conception (Chandra et al. 2005). Unintended childbearing is associated with a wide range of negative health statuses for children and mothers (Brown and Eisenberg 1995). In fact, the combination of these negative health statuses and rising levels of unintended childbearing led the U.S. Department of Health and Human Services (in its National Health Promotion and Disease Prevention Objectives) to target a substantial reduction in unintended childbearing in its objectives for both 2000 (formulated in 1990) and 2010 (formulated in 2000). According to data available from the

most recent national estimates of unintended childbearing, the goal for 2000 was not met, and the goal for 2010 is not likely to be met either. Research that has addressed the social consequences of unintended childbearing suggests that they may be severe, may permeate multiple aspects of social life, and may persist for the very long term (Axinn et al. 1998; Barber et al. 1999; Baydar 1995; Brown and Eisenberg 1995).

The causal nature of the relationship between unintended childbearing and negative health statuses is the subject of some debate (Barber 2003; Barber et al. 2003; Barber and East 2003; Brown and Eisenberg 1995; Joyce et al. 2000, 2002; Korenman et al. 2002). Unfortunately, without random assignment of unintended births (experimental designs), it is impossible to determine causation with great certainty. Unintended births are drawn disproportionately from lower income mothers with less education. Thus, it is unclear whether the children would suffer negative outcomes regardless of whether their births are unintended. Some analyses featuring fixed-effects models suggest that perhaps these relationships are not causal, because siblings within the same family experience similar outcomes regardless of the intention status of their birth (e.g., Joyce et al. 2000). Although it is impossible to completely rule out this unobserved heterogeneity hypothesis, new evidence suggests that many of the consequences of unintended childbearing are likely to apply equally to all children in the family, not just the child born from the unintended birth (Barber 2003; Barber et al. 2003; Barber and East 2003). Thus, a family-level effect is to be expected – rather than an effect on only the child born from the unintended pregnancy. Unfortunately, as Joyce et al. (2000) suggest, the fixed-effects model strategy may not be an appropriate approach if the consequences of unintended childbearing that produce the relationship between unintended childbearing and child

development are experienced by all of the children in a family. Thus, it seems likely that at least part of this negative association is causal.

While the debate continues to swirl around the consequences of unintended pregnancy, there is no debating the harmful health and social status consequences associated with it. Yet most scholars, caught up in the escalating discussion of cause and effect, have largely ignored a key question: why are unintended pregnancies so prevalent, and what, if anything, can social scientists do to better understand their occurrence? In fact, the high rates of unintended pregnancy are a major health and public policy concern, even if they have no causal consequences, because the occurrence of pregnancies to women who do not want them is itself a negative health outcome. For this reason, the United States' Office of Population Affairs operates the country's Title X family planning clinic program with the main aim of offering services to ensure that women do not have pregnancies they do not want (Alan Guttmacher Institute 2002; Frost 1996, 2001; Mosher 1990). A more comprehensive scientific understanding of unintended pregnancy is essential to the formulation of programs and related policies aimed at reducing unintended pregnancy.

Mismatches between intentions and behavior – such as an unintended pregnancy – are also of great theoretical interest. A long-standing body of theory in the social sciences argues that individuals' beliefs, attitudes, and intentions are an essential determinant of their behavioral choices (Ajzen 1988; Fishbein and Ajzen 1975; Mead 1934). On the other hand, the confrontation between these intentions and the physical, social, or psychological constraints that prevent individuals from realizing their intentions is an equally longstanding topic of theoretical inquiry (Alexander 1989, 1990; Alexander et al. 1987; Coleman 1994; Giddens1984). Clearly individuals do not always choose, nor are they always able to act in ways that are consistent with

their intentions (Bagozzi and Warshaw 1990; Grube and Morgan 1990; Liska 1984; Schoen et al. 1999; Wright 1998). Recent theoretical advances in the study of relationships among attitudes, intentions, and behavior explicitly recognize these constraints (Ajzen 1988, 1991; Ajzen and Madden 1986; Gibbons et al. 1995, 1998). Nevertheless, empirical evidence of the micro-dynamics connecting intentions, behavioral constraints, and behavior remains illusive. Investigation of unintended pregnancy has the potential to advance these theories because pregnancy-related attitudes and intentions must confront constraints related to relationships, sexuality, contraception, contraceptive failure, and activities that compete with childbearing, to determine actual pregnancy outcomes (Schoen et al. 1999). Investigating the detailed micro-dynamics of the social context of unintended pregnancy will provide significant new insight into these issues.

One of the major obstacles to scientific research on unintended pregnancy is the measurement of unintended pregnancy. Most study designs, such as that used in the National Survey of Family Growth (NSFG), feature a single cross-sectional interview with lifetime retrospective reporting. As a result, all measures of unintended childbearing are based on retrospective reporting of intention, contraception, happiness, and relationship status for pregnancies that occurred sometime before the interview, often years before the interview. Each of these important dimensions is subject to somewhat different levels of retrospective reporting error, but methodological research on surveys suggests that these errors will be substantial and significant (Groves et al. 2001; Schwarz and Sudman 1994; Sudman et al. 1996). Of greatest concern is that individuals alter their feelings to become more consistent with behavior (Festinger 1957; Williams et al. 1999), which may produce substantial underestimates of the true level of unintended childbearing. A second, closely related concern is that retrospective reporting

severely limits the extent to which these studies can measure temporal dynamics in intentions/attitudes, relationship characteristics, or contraceptive use. In other words, existing measures of intentions, relationships, and contraception are limited to a single referent time point per pregnancy and do not measure how behavioral, attitudinal, and contextual aspects of relationships and contraceptive use may change directly before or after a pregnancy.

Longitudinal studies, which interview the same young women multiple times, address some potential shortcomings of the cross-sectional measures. The National Longitudinal Study of Adolescent Health (Add Health), the National Longitudinal Survey of Youth (NLSY), and the National Survey of Families and Households (NSFH) are all important alternatives to the cross-sectional measures of unintended pregnancy. Multiple interviews with the same young women at multiple times allow measurement of intentions, contraception, happiness about pregnancy, and relationship characteristics at one time point, followed by subsequent measurement of pregnancy. This design greatly reduces the risk of retrospective reporting error. Unfortunately, even in these designs, lengthy gaps between interviews greatly increase the chance of changes in the immediate context of pregnancy and retrospective reporting errors about that context. Without very frequent re-interviews, it is impossible to fully capture the temporal dynamics in intentions, contraception, happiness toward pregnancy, and relationship characteristics. The costs of face-to-face interviews prohibit frequent re-interviewing – an alternative strategy is a high scientific priority.

To address the critical limitations in existing measures of unintended pregnancy, we are intensively measuring these key processes. Specifically, we are collecting weekly journal-based attitudinal and behavioral measures of pregnancy, relationships, and contraceptive use, and conducting semi-structured follow-up interviews with young women who avoid pregnancy as

well as those who become pregnant. These measures reduce the retrospective reporting period to one week, and capture the dynamics in attitudinal and behavioral aspects of relationships and contraceptive use during the early adult years, when both the instability and the risk of unintended pregnancy are at their peak. Relatively recent changes in the US population, such as widespread access to computers and the Internet as well as cellular and other telephone technologies, as well as recent advances in computer assisted interviewing technologies, have opened substantial new avenues for social and behavioral measurement (Couper 2005), such as electronic journaling. The electronic data collection journal we propose provides the flexibility to add contingent measures, based on specific events. So, for example, as a new relationship begins and changes, we can measure the different relevant dimensions of that relationship, including physical intimacy, time spent together, commitment, conflict, and couple identity. We believe that weekly measurement is the correct periodicity for several reasons. First, very frequent measurement is important to ensure accurate recall of coitus-specific methods, such as condoms. Second, NSFG Cycle 6 (2002) data suggest that more than 12% of women aged 18 to 22 years of age use multiple contraceptive methods per month, indicating high levels of instability and change. Third, previous diary studies suggest that high response rates are, in part, because the diary becomes part of the respondent's routine and is thus less likely to be forgotten (Halpern et al. 1994; Jaccard et al. 2004; Searles et al. 1995). In addition, not all questions are asked of every respondent each week. For example, attitude questions are rotated so that each is asked quarterly. Overall, a weekly measurement strategy balances the need for a routine with the costs of minimizing measurement error while not being overly-burdensome to respondents.

In this paper, we provide a detailed description of the study design and an early description of the young women in our sample using information from both the completed

baseline interviews and the on-going weekly journal-based surveys. In addition, we explore who is more likely to experience a pregnancy during the study period thus far, focusing primarily on the sociodemographic characteristics of the young women reported at the baseline interview. The results presented throughout the paper are preliminary as data collection ends January 2012.

Data and Methods

Sample

Our sample consists of young women, ages 18-19, residing in a Michigan county. Their names and contact information have been obtained from public records. To be eligible in the recruitment phase of the study, the young women must be no younger than 18 and no older than 19 at the time they are first sampled. We have drawn our sample in four replicates, each of which is representative of the population. The dates at which each replicate entered the field are: 1) March 2008; 2) July 2008; 3) November 2008; and 4) March 2009.

Study Design

An initial 60-minute face-to-face survey interview is conducted to assess important aspects of their family background; demographic information; key attitudes, values, and beliefs; current and past friendship and romantic relationships; education; and career trajectories. Women who complete the baseline interview are re-interviewed weekly for a period of approximately 2.5 years, to provide dynamic measurement of rapidly changing aspects of their lives, including relationships (described in detail below). We are also conducting semi-structured interviews with a subsample of respondents chosen based on information in the weekly surveys.

Once the in-person baseline interview is completed, all respondents are invited to participate in the weekly journal-based survey. The survey period for each respondent is approximately 2.5 years, and during that time each respondent can potentially complete up to

183 surveys (if they complete a new survey every 5 days). We know that most respondents will not complete 183, but we have designed the journal to offer as much flexibility and encouragement to respondents as possible – in an effort to motivate them to complete a high number of surveys during their 2.5 year period.

The first weekly survey, or journal 1, is conducted immediately following the baseline interview – in most cases, while the field interviewer is still in the respondent's home. Respondents are enrolled into the weekly data collection by the field interviewer. Those with access to the Internet are instructed to complete the survey each week on the web. Respondents without Internet access are instructed to complete the surveys by telephone with an interviewer. The field interviewer completes journal 1 with the respondent, ideally using the same mode to which the respondent is assigned. So, if the respondent is assigned to the telephone mode, the field interviewer helps the respondent dial the toll-free study phone number and waits while the respondent completes journal 1 with the phone interviewer. If the respondent is assigned to an internet mode, the field interviewer assists them in logging on to the study web portal and completing their first journal. Given that access to computers and internet connections may change across the study period, respondents initially assigned to the internet may, in any week, call the toll-free study phone number to complete their journal with an interviewer over the phone. Tailoring the data collection mode to the respondent's individual preference is our first step in reducing nonresponse – research clearly demonstrates that tailoring the mode to the respondent can powerfully reduce nonresponse (Groves and Couper 1998; Groves et al. 2004). However, even with mode tailoring and incentives ($35 for the baseline interview and $1 per weekly survey with $5 bonuses for on-time completion of five weekly surveys in a row), there is some failure to complete the weekly journals as well as some delayed completion. We have

developed a strategy of successive follow-up in the case of non-completion, first through automated reminders and then personal contacts by phone, email, or letter (described below).

Five days after journal 1 is completed, journal 2 becomes "live". At this point, the respondent can access her journal 2 through the study web portal, or can call the toll-free study phone number and take her survey with a phone interviewer. Seven days after journal 1 is completed, an invite is sent to the respondent to complete journal 2 (if the respondent has not already completed journal 2 on her own). This invite is in the format requested by the respondent at the time of enrollment – email, cell phone text message, or both. Once a survey is completed, the next survey becomes live 5 days later, and an invite is sent 7 days later, and so on. If the survey is not completed on the day of the invite, a reminder email/text message is sent the next day. And, if the survey is not completed the day of the first reminder, a second reminder email/text message is sent the following day. If the survey still is not completed, a new invite is sent via email/text message 14 days after the last survey was completed, with reminders the next day and following day if needed. This pattern of new invites sent every 7 days continues until an interview is completed and a new pattern begins.

In addition to the automated email/text reminder protocol, respondents who do not complete their surveys also receive a series of telephone, email, and letter reminders. If 10 days elapse since the last completed survey, phone interviewers attempt to contact the respondent by phone. If the respondent is reached, the phone interviewer attempts to complete the survey with the respondent at that time. If the respondent is unable to do the survey at that time, the phone interviewer reminds the respondent to do her own interview – giving her the study website or the toll-free study phone number to call at a later time. If an answering machine/voicemail is reached, the phone interviewer leaves a message for the respondent to visit the website or to call

the toll-free number. If another person is reached (e.g., a parent, sibling, or roommate), a message is left for the respondent to call the toll-free number (the website address is never provided to anyone other than a respondent). If the respondent does not complete her survey on the 10th day, a second phone attempt is made on day 12 and a similar protocol is followed. If the survey still is not completed after these two phone contact attempts, another phone contact attempt is made on day 19. A refusal conversion packet that includes a letter and a study trinket (e.g., pen, chapstick, compact, pencil) is mailed if it has been 30 days since the last completed survey. If a respondent still has not completed the next survey, at 60, 90, and 120 days since the last completed survey, they are offered a monetary bonus for completing the next survey ($10, $20, and $30, respectively).

We have completed the baseline data collection in all four replicate samples and have 1003 baseline interviews and 22,315 weekly surveys (between one and seventy three per woman, depending on the baseline interview date). Our experience indicates that our incentive scheme, coupled with the cooperative nature of this age group and their interest in the subject matter has resulted in extremely high cooperation rates. We have an 83% response rate and a 94% cooperation rate for the baseline interviews and over 99% of respondents who completed a baseline interview enrolled in the weekly survey portion of the study (N=992). Furthermore, weekly survey participation rates have thus far been high. Almost 70% of respondents have completed a survey in the past 30 days and over 40% always or usually complete their weekly surveys on time (defined as less than 10 days since the last completed survey). Our field and phone lab interviewers have developed an excellent rapport with the study respondents, and we expect that rapport to greatly contribute to our success in reducing nonresponse and attrition. Nevertheless, issues of concern remain regarding continued participation and timeliness of the

weekly journal submissions. Thus, we intend to investigate attrition from the study throughout the remaining data collection and the influence of nonresponse error in our substantive analyses.

Baseline Measures

Sociodemographic characteristics. A select set of sociodemographic characteristics measured at the baseline interview are examined in the current paper. Age is coded in years. Race is coded as white, African American, Native American, and Asian/Pacific Islander. Due to small numbers in the last two groups (see Table 1), the logistic regression model for pregnancy includes a dummy for African American versus non-African American. Ethnicity is a dichotomous variable, coded 1 if the respondent is Latina and 0 otherwise. Education is operationalized as the highest grade completed with those who completed 12th grade or less coded 1 and those who completed more than 12th grade coded 0. School enrollment is created using information about the type of school the respondent is currently enrolled in and highest grade completed and includes the following categories: 1) not enrolled and did not graduate high school, 2) not enrolled and did graduate high school, 3) high school, 4) two year college/vocational/technical/other, and 5) four year college. Employment status is a dichotomous measure, coded 1 if the respondent was employed at the time of the baseline interview and 0 otherwise. A respondent is coded as receiving public assistance if she identified receiving at least one of the following: 1) WIC, 2) FIP, 3) cash welfare, or 4) food stamps. Respondents were also asked whether they had enough money at the end of the month. Response categories include: 1) some money left over, 2) just enough money to make ends meet, and 3) not enough money to make ends meet. A dichotomous measure indicating whether the respondent is currently living with a parent or grandparent is also created (1/0). Family structure is based on information about who the respondent lived with while growing up and includes the following four categories: 1)

both biological parents, 2) biological parent and step-parent, 3) single biological parent only, and 4) other situations. Parental income is measured as a categorical variable: 1) $14,999 or less, 2) $15,000-$44,999, 3) $45,999-$74,999, 4) $75,000 or more, and 5) don't know/refused.

Sexual, contraceptive, and pregnancy experiences. Sexual, contraceptive, and pregnancy experiences as of the baseline interview are also investigated. A dichotomous indicator of ever having had vaginal sexual intercourse is created, as is a continuous measure of age at first sexual intercourse in years. Lifetime number of sexual partners is also continuous. Respondents who have ever had sex without using birth control are coded 1 and 0 otherwise. Prior pregnancy experience is included as a three category variable: 1) no prior pregnancies, 2) one prior pregnancy, and 3) two or more prior pregnancies. We also create dichotomous measures for currently pregnant (as indicated by a positive pregnancy test) and probably pregnant, both as of the baseline interview (1/0).

Relationship characteristics. We include several characteristics of the relationship that respondents identified as current at the baseline interview. Relationship type is a four category measure for married, engaged, cohabiting, and other relationship. Age difference between the respondent and her partner is created by comparing their ages and is collapsed into the following categories: 1) partner is 1-2 years younger, 2) partner is the same age, 3) partner is 1-2 years older, and 4) partner is 3 or more years older. A dichotomous indicator for racial difference between partners is included (1=respondent and partner are difference races and 0=otherwise). Length of the relationship is measured in months by comparing the relationship start date and the interview date. Dichotomous indicators for the following are also examined: ever had sex with the partner, ever talked about birth control with the partner, had a child with the partner, spend a lot of time with the partner, exclusive with the partner, ever fought with the partner, and ever had

conflict with the partner (defined as the partner threatened or pushed/hit/hurt respondent). Satisfaction with and commitment to the partner are continuous measures ranging from not at all to extremely. Power in the relationship is based on a question that asks who decides what to do or where to go (respondent, partner, or both).

Pregnancy intentions. Another key strength of our project is a more detailed and nuanced measure of prospective pregnancy intentions. In both the baseline interview and the weekly-journal surveys, we measure prospective intention using two questions, one about the positive desire to get pregnant and have a baby and one about the negative desire to get pregnant and have a baby. Respondents are asked, "First, how much do you want to get pregnant during the next month? Please give me a number between 0 and 5, where 0 means you don't at all want to get pregnant and 5 means you really want to get pregnant." They are then asked, "And next, how much do you want to avoid getting pregnant during the next month? Please give me a number between 0 and 5, where 0 means you don't at all want to avoid getting pregnant and 5 means you really want to avoid getting pregnant." Due to small cell sizes, 0-2 are collapsed into one category and 3-5 are collapsed into one category; the vast majority of young women answered 0 and/or 5.

Weekly Journal-based Survey Measures

Changes. Respondents are asked several of the same questions across the weekly surveys in order to capture change. For the current paper, we provide early descriptive results for respondent-level summary measures of the following indicators: 1) respondent reported any new partner during the study period, 2) respondent ever forgot to use birth control in a prior week[1], 3) respondent experienced any changes in her pregnancy status (among the categories of not

[1] If a respondent reported not using birth control in the previous week, she was asked the reason for this non-use; "forgot" is one of the choices provided.

pregnant, probably pregnant, and positive test results), 4) any reports of a pregnancy (see details below), 5) respondent had a live birth, and 6) respondent ever reported conflict with a partner (defined as partner threatened or pushed/hit/hurt respondent) during the study period.

Pregnancy. We operationalize a pregnancy as a report of a positive pregnancy test or a respondent reporting that she is "probably pregnant." A respondent is coded 1 if she reported any pregnancy after the baseline interview and 0 otherwise.

Analytic Strategy

We begin by providing preliminary descriptive statistics of the sample of young women, their relationships, and their pregnancy intentions as of the baseline interview. We then estimate a preliminary logistic regression model for reporting a pregnancy during the weekly surveys that includes a subset of the sociodemographic characteristics of the young women reported at the baseline interview. All analyses are conducted using Stata/SE 10.0. Recall that all results are preliminary as data collection ends January 2012.

Results

The first six tables provide an early description of the 992 respondents enrolled in the journal portion of the study as of the baseline interview, as well as a summary of any changes across the weekly surveys experienced by the 940 respondents who completed more than one weekly survey thus far. The last table provides preliminary logistic regression results of reporting a pregnancy during the weekly surveys on a select set of baseline sociodemographic characteristics measured at the baseline interview.

Table 1 presents the percentage distributions of a select set of sociodemographic characteristics. The majority of respondents are 19 years old, 34% are African American, and about 8% are Latina. Over 60% of respondents have completed 12th grade or less. About 13% of

respondents were enrolled in high school at the time of the baseline interview, over half were enrolled in a 2 or 4 year college, and less than a third were not enrolled in school. Half of the respondents were employed at the time of the baseline interview. Over one-quarter of respondents reported currently receiving public assistance and over half reported having just enough or not enough money at the end of the month to make ends meet. Over two-thirds of the respondents lived with their parents or grandparents as of the baseline interview. Less than half of respondents had lived with both biological parents while growing up and about one-quarter had lived with one parent. Over 14% of respondents' parents had an annual income of less than $15,000.

Table 2 presents the sexual, contraceptive, and pregnancy experiences of respondents. Over 76% have ever had sex. The average age at first sexual intercourse was about 15 years. The median number of lifetime partners among those who had ever had sex was three. Almost two-thirds of the sexually experienced respondents reported ever having had sex without using birth control. Almost one-quarter of respondents reported at least one previous pregnancy. About 5% were pregnant at the time of the baseline interview and about 1% were probably pregnant.

Table 3 presents select characteristics of respondents' current relationship as of the baseline interview (over 73% of the 992 respondents reported being in a relationship at the baseline interview). Over 2% of respondents in a relationship were married to their partners another 10% were engaged, and about 14% were living with their partners. About 20% of respondents' relationships were with a partner who was the same age and over 30% had a partner who was three or more years older. Twelve percent of partners identified were a different race than the respondent. Relationship length ranged from less than one month to over eight years with an average length of about 18 months. Over three-quarters of the relationships involved

sexual activity. About 12% of respondents had at least one child with the partner. The majority of relationships were exclusive and both satisfaction with and commitment to partners was high (about 4 on a scale of 1 (not at all) to 5 (extremely)). Both the respondent and partner had equal power in the vast majority of relationships. About two-thirds of the respondents had ever fought with their partner and over 4% reported that their partner had threatened or pushed/hit/hurt them.

Tables 4a and 4b present cross-tabulations of general and partner-specific pregnancy intentions with two components – the desire to get pregnant by the desire to avoid pregnancy. Table 4a shows that the majority (95%) of young women reported no general desire to get pregnant and a strong desire to avoid pregnancy. About 1% were positive (strong desire to get pregnant and no desire to avoid pregnancy), over 2% were indifferent (no desire to get pregnant and no desire to avoid pregnancy), and less than 1% were ambivalent (strong desire to get pregnant and strong desire to avoid pregnancy). Table 4b reveals similar overall patterns for partner-specific pregnancy, with a few notable differences. The percent of women who reported no desire to get pregnant and a strong desire to avoid pregnancy was lower when asked about pregnancy with their partner and the percents of positive, indifferent, and ambivalent intentions were each higher.

Table 5 presents a preliminary summary of some of the types of changes that are captured in the weekly surveys for those respondents who completed more than one weekly survey thus far (about 95% of the 992 respondents). Over 46% of respondents have had at least one new partner. The majority of these new relationships were changes in partners between weeks versus going from not having a partner in one week to having a partner in the next week (results not shown). Over 14% of respondents reported forgetting to use birth control during the study as a reason for non-use in a previous week. Over 16% of respondents experienced at least one change

in pregnancy status (e.g., not pregnant to probably pregnant). Among those who experienced such changes, the number of changes ranged from 1 to 7 with an average of 2 changes per respondent (results not shown). Over 12% respondents ever reported being pregnant and almost 5% of respondents had a baby during the study. Over 11% of respondents ever reported that their partner had threatened or pushed/hit/hurt them.

Table 6 presents the preliminary results of the pregnancy analysis. African American women were more likely than non-African American women to have reported a pregnancy during the study period thus far. Compared to women attending a 4-year college at the time of the baseline interview, women who were not enrolled (either graduated or did not graduate high school), enrolled in high school, or enrolled in a 2-year college (although marginally so) were more likely to report a pregnancy. Women who reported that they had just enough money at the end of the month to make ends meet were also more likely (although marginally so) to report a pregnancy than those who reported having some money left over at the end of the month. Women who grew up in a single-parent home or in an "other" family situation (e.g., with grandparents or other relatives) were more likely than those who grew up with both biological parents to have reported a pregnancy during the study period thus far.

Discussion

This paper presents the background and motivation for our study as well as a detailed description of the study design. We also provide a first look at the characteristics of the young women enrolled in our study. The descriptive results presented here are preliminary and are just a preview of the rich information we are collecting. These young women represent a diverse set of circumstances and life experiences. A unique feature of our study is the ability to capture some of these dynamic experiences over time. The preliminary results presented in this paper

indicate that these young women experience many important life events and changes from week to week, which may have implications for unintended pregnancy. Our pregnancy analysis is very preliminary as data collection ends January 2012. Early results, however, suggest that there may be important differences in who is at risk of experiencing a pregnancy during the transition to young adulthood, and given the young women's low desire to become pregnant at the beginning of the study period, a substantial proportion of these pregnancies may be unintended. We plan to investigate a vast set of time-varying measures of contraceptive use, relationship characteristics, and attitudes, to account for intention status, and to estimate the risk of first as well as subsequent reports of a pregnancy using appropriate event history techniques.

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Table 1. Sociodemographic Characteristics of Respondents at Baseline Interview, MSYW, 2008-2009

	Percentage
Age	
18 years old	41.0
19 years old	50.1
20 years old	8.9
Race	
White	63.5
African American	33.6
Native American	2.1
Asian	0.8
Ethnicity	
Non-Latina	91.9
Latina	8.1
Highest grade completed	
12^{th} grade or less	62.9
More than 12^{th} grade	37.1
School enrollment and type	
Not enrolled and did not graduate	8.4
Not enrolled and did graduate	22.3
High school	13.3
2 year college/vocational/technical/other	28.7
4 year college	27.3
Employment status	
Not employed	49.8
Employed	50.2
Receiving public assistance	
No	73.2
Yes	26.8
Enough money at end of month	
Some money left over	47.8
Just enough money to make ends meet	33.7
Not enough money to make ends meet	18.5
Living with parents/grandparents	
No	30.6
Yes	69.4
Family Structure	
Two biological parents	46.1
One biological parent/one step parent	6.1
One biological parent only	23.4
Other	24.4
Parent's income	
$14,999 or less	14.4
$15,000-$44,999	28.0
$45,000-$74,999	19.3
$75,000 or greater	18.0
Don't know/Refused	20.3
N	992

Table 2. Sexual, Contraceptive, and Pregnancy Experiences of Respondents at Baseline Interview, MSYW, 2008-2009

	Percentage or Mean(Median)
Ever had sex	
No	23.1
Yes	76.9
Age at first sex[†]	15.66(16)
Lifetime number of sexual partners[†]	4.42(3)
Ever had sex without birth control[†]	
No	36.7
Yes	63.3
Number of prior pregnancies	
Zero	77.2
One	14.6
Two or more	8.2
Currently pregnant	
No	94.5
Yes	5.5
Probably pregnant	
No	98.6
Yes	1.4
N	992

[†]Among sexually experienced respondents (N=763).

Table 3. Characteristics of Respondents' Relationship at Baseline Interview, MSYW, 2008-2009

	Percentage or Mean(Median)
Relationship type	
Married	2.3
Engaged	10.2
Cohabiting	14.2
Other relationship	73.3
Age difference between partners	
Partner 1-2 years younger	11.2
Partner same age	20.4
Partner 1-2 years older	37.6
Partner 3+ years older	30.8
Race difference between partners	
No	87.4
Yes	12.6
Length of relationship (months)	17.76(11)
Ever had sex with partner	
No	21.5
Yes	78.5
Talked about birth control with partner	
No	24.4
Yes	75.6
Had a child with partner	
No	87.8
Yes	12.2
Spend a lot of time with partner	
No	15.6
Yes	84.4
Exclusive with partner	
No	11.5
Yes	88.5
Satisfaction with partner	4.14(4)
Commitment to partner	4.50(5)
Power in relationship	
Respondent	11.5
Partner	1.6
Both	86.9
Ever fight	
No	35.6
Yes	64.4
Ever conflict	
No	95.8
Yes	4.2
N	731

Table 4a. General Pregnancy Intentions of Respondents at Baseline Interview, MSYW, 2008-2009

	No desire to avoid pregnancy	Strong desire to avoid pregnancy	Total
No desire to get pregnant	Indifferent 2.28%	Negative 95.33%	97.61%
Strong desire to get pregnant	Positive 1.41%	Ambivalent 0.98%	2.39%
Total	3.69%	96.31%	100%

Table 4b. Partner-Specific Pregnancy Intentions of Respondents at Baseline Interview, MSYW, 2008-2009

	No desire to avoid pregnancy	Strong desire to avoid pregnancy	Total
No desire to get pregnant	Indifferent 4.64%	Negative 88.92%	93.56%
Strong desire to get pregnant	Positive 3.74%	Ambivalent 2.70%	6.44%
Total	8.38%	91.62%	100%

Table 5. Changes Across Journals Among Respondents Who Completed More Than One Weekly Journal, MSYW, 2008-2009

	Percentage
Any new partner	
No	53.5
Yes	46.5
Ever forgot to use birth control	
No	85.2
Yes	14.8
Any change in pregnancy status	
No	83.9
Yes	16.1
Any reports of a pregnancy	
No	87.3
Yes	12.7
Any live birth	
No	95.4
Yes	4.6
Any conflict with partner	
No	88.3
Yes	11.7
N	940

Table 6. Logistic Regression Results (Odds Ratios) of Reporting a Pregnancy in Weekly Journals on Baseline Sociodemographic Characteristics, MSYW, 2008-2009

	Odds Ratio
Age (ref: 18 years)	
19 years	1.23
20 years	0.54
Race (ref: Not African American)	
African American	1.67*
School enrollment and type (ref: 4 year college)	
Not enrolled and did not graduate	2.59*
Not enrolled and did graduate	3.76***
High school	3.24**
2 year college/vocational/technical/other	1.82+
Enough money at end of month (ref: Some money left over)	
Just enough money to make ends meet	1.56+
Not enough money to make ends meet	1.50
Family structure during adolescence (ref: Two biological parents)	
One biological parent/one step parent	1.84
One biological parent only	2.53**
Other	2.63**
Religion (Not important to most important)	1.02
Chi square (df=14)	74.11***
N	940

Notes: Model controls for number of weekly surveys.
+ $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$