



Published in final edited form as:

Womens Health Issues. 2009 ; 19(3): 159–166. doi:10.1016/j.whi.2009.02.001.

Associating Pregnancy Intent with Pregnancy: Prospective Findings from the Central Pennsylvania Women’s Health Study (CePAWHS)

Cynthia H. Chuang, MD MSc^{1,2}, Carol S. Weisman, PhD^{2,3}, Marianne M. Hillemeier, PhD^{2,4}, Fabian T. Camacho, MS², and Anne-Marie Dyer, MS²

¹Division of General Internal Medicine, Department of Medicine, Penn State College of Medicine, Hershey, PA

²Department of Public Health Sciences, Penn State College of Medicine, Hershey, PA

³Department of Obstetrics and Gynecology, Penn State College of Medicine, Hershey, PA

⁴Department of Health Policy and Administration, Penn State University, University Park, PA

Abstract

Objective—We examined whether adult women’s intention for future pregnancy predicted actual pregnancies occurring in a 2-year follow-up study.

Methods—Data are from the Central Pennsylvania Women’s Health Study population-based longitudinal survey of women ages 18–45 (n=1,420). The analytic sample consists of 889 non-pregnant women who had reproductive capacity. Intention for future pregnancy was ascertained at baseline, and women were re-interviewed 2 years later to document interval pregnancies. The impact of pregnancy intention on subsequent pregnancy was analyzed using multiple logistic regression adjusting for relevant covariates.

Results—At baseline, 46% of women were considering a future pregnancy. One hundred thirty-seven women became pregnant during the 2-year study; of these pregnancies, 83% were intended (occurring in women considering a future pregnancy at baseline) and 17% were unintended (occurring in women not considering a future pregnancy at baseline). Pregnancies occurred in 28% of women who at baseline were considering future pregnancy and 5% of women not considering pregnancy. In adjusted analysis, baseline pregnancy intention was associated with pregnancy occurrence in women ages 25–34 (adjusted OR 4.19, 95% CI 2.20–7.97) and ages 35–45 (adjusted OR 26.89, 95% CI 9.05–79.93), but not in women ages 18–24.

Conclusions—In this prospective study, pregnancy intention was strongly associated with pregnancy incidence over a 2-year follow-up period among women ages 25 and older, suggesting that pregnancy intentions could be used to identify women at higher risk of pregnancy. Future investigation is needed to confirm these findings and to explore the reasons why pregnancy intentions were not predictive for women ages 18–24.

© 2009 Jacobs Institute of Women’s Health. Published by Elsevier Inc. All rights reserved.

Corresponding Author: Cynthia H. Chuang, MD MSc; Division of General Internal Medicine, HU15; Penn State Hershey Medical Center; Hershey, PA 17033, Phone: (717) 531-8161, Fax: (717) 531-7726. cchuang@psu.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Keywords

pregnancy intention; unintended pregnancy; preconception health

Introduction

Pregnancy intention is an important concept in reproductive health research and practice. Whether the focus is on preventing unintended pregnancy or on promoting preconception health for women who may become pregnant, it is important to understand the conditions that are likely to place women at risk for pregnancy in order to identify women most in need of services. Yet little research addresses whether pregnancy intentions actually predict pregnancy occurrence and most research on the topic uses retrospective measurements of pregnancy intention. Although pregnancy intention refers to a woman's desire for pregnancy prior to or at the time of conception, standard methods for measuring pregnancy intention involve recall of intention after the pregnancy has already occurred. The well-known finding that 49% of pregnancies in the United States are unintended (i.e., mistimed or unwanted) comes from the National Survey of Family Growth (NSFG), which ascertains pregnancy intention retrospectively (Finer & Henshaw, 2006). Consequently, the validity of standard measures of pregnancy intention has been called into question (Santelli, et al., 2003; Trussell, Vaughan & Stanford, 1999).

There are several reasons why retrospective measurement of pregnancy intention is problematic. The main concern is recall bias. Women's reports of the intendedness of a particular pregnancy are not consistent when asked at different points in time (Bankole & Westoff, 1998; Joyce, Kaestner & Korenman, 2000; Williams, Piccinino, Abma & Arguillas, 2001). Women tend to recall increased intendedness for an index pregnancy over time, which may result from natural tendencies to feel more positively about a pregnancy, or a child born from that pregnancy, over time (Bankole & Westoff, 1998). Recall bias can be influenced by socially desirable responses, which may also lead to over-reporting of intendedness. Similarly, while it would seem that a pregnancy occurring while contraception was being used would be unintended, only 68% of pregnancies resulting from contraceptive failures were subsequently reported to be unintended in the NSFG (Trussell, Vaughan & Stanford, 1999). This observation supports evidence that contraceptive use is not a proxy for intention, but it also suggests that retrospective recall of intention may be problematic.

One prospective study based on the 1988 NSFG included re-interviews in 1990 of women who reported in 1988 that they wanted to avoid childbearing for good or to postpone pregnancy for at least the next three years (Williams, Abma & Piccinino, 1999). Live births occurred in 10% of women wishing to postpone pregnancy and 8% of women not wanting a future pregnancy. The study analyzed births (not pregnancies) only among women intending to avoid pregnancy; to our knowledge, no prospective study has investigated pregnancy incidence in adult women both intending and not intending future pregnancy.

This manuscript uses a unique longitudinal data set of adult reproductive-age women to address the research question: Does pregnancy intention predict pregnancies occurring prospectively during a two-year follow-up period? To examine this question we control for other variables that may be associated with an incident pregnancy. These variables fall into three general domains: (1) *family and relationship context*, including the presence of a partner, which would be expected to increase the likelihood of pregnancy; and previous childbearing, which would be expected to reduce intent and pregnancy (Philipov, Speder & Billari, 2006); (2) *health status*, which reflects women's capacity for a healthy pregnancy and would be expected to increase achievement of pregnancy (Bloom, Curry & Durham, 2007; Gesink Law, Maclehose

& Longnecker, 2007; Ramlau-Hansen, Thulstrup, Nohr, Bonde, Sorensen & Olsen, 2007; Tomblason, 1954); and (3) *socioeconomic status* and other *sociodemographics*, which are expected to have mixed effects on pregnancy. We expect that younger women will be more likely to become pregnant, while older women will be more likely to have completed childbearing or have declining fertility (Frost, Singh & Finer, 2007). Higher socioeconomic status and adequate health insurance suggests greater resources for childbearing, but socioeconomic status generally is inversely associated with fertility (dos Santos Silva & Beral, 1997; Manlove, 1998; Parr, 2005). Race/ethnicity is associated with fertility, with some race/ethnic groups being more likely to plan pregnancies or to have more children, on average, than others (Denavas, 1988; Yang & Morgan, 2003).

Methods

Study Design

Data for these analyses are from the Central Pennsylvania Women's Health Study (CePAWHS), which includes a longitudinal population-based survey of reproductive-age women residing in a 28-county region in Central Pennsylvania. This region was selected for study because it is diverse with respect to socioeconomic status and includes urban as well as rural and semi-rural areas. CePAWHS was approved by the Institutional Review Board of the Penn State College of Medicine.

The current study uses data collected at baseline and at 2-year follow-up. The baseline survey was a random-digit dial telephone survey of 2,002 women conducted between September 2004 and March 2005. Women 18–45 years old, residing in the 28-county Central Pennsylvania region and English or Spanish-speaking were eligible. Minority and rural populations were over-sampled to ensure adequate representation of these groups. The sample was highly representative of the target population with regard to age, race/ethnicity, educational level, and poverty status. Further details regarding the sampling methodology, response rate, and representativeness have been published elsewhere (Weisman CS, et al., 2006). During the baseline survey, 90% of participants consented to be re-contacted for a follow-up telephone survey and 1,420 follow-up surveys were successfully completed 2 years following the baseline survey (79% response rate). The main reason for non-response was failure to locate women who had changed residences for whom updated contact information was not available; only 5% refused the interview. Women were more likely to participate in the follow-up interview if they were older (ages 35–45), college-educated, married or cohabiting, not in poverty, and non-Hispanic White; there was no significant difference by location of residence along the rural-urban continuum.

For this analysis, we excluded women in the follow-up dataset ($n=1,420$) who were pregnant at the time of the baseline survey ($n=54$); incapable of reproduction due to hysterectomy ($n=94$), tubal sterilization ($n=303$), or other infertility ($n=75$); did not answer the question regarding pregnancy intention at baseline ($n=3$); or did not answer whether or not a pregnancy had occurred during the study at follow-up ($n=2$). This resulted in 889 women in the analytic sample.

Definition of Variables

Independent Variable—Pregnancy intention at the time of the baseline survey was measured as follows: “Are you considering becoming pregnant within the next year, at some other time in the future, or not at all?” The wording of this measure uses the phrase “considering becoming pregnant” rather than more commonly used terms such as “planning” or “intending” pregnancy. This is deliberate, as the latter terms convey a rational decision making process with regard to fertility that is not accepted, or is viewed with hostility, in some groups.

Recognizing the diversity of sociocultural contexts in which pregnancy intentions might be interpreted by our respondents, we chose to word the question using a more neutral term that was deemed to be appropriate for our target population by our project's Steering Committee comprised of community representatives. At baseline, 9% of women in the analytic sample (n = 80) reported considering pregnancy in the next year, 37% (n = 325) reported considering pregnancy some other time in the future (this group includes 33 women who reported they were unsure about their pregnancy intentions), and 54% (n = 484) reported not considering a future pregnancy at all. Due to the relatively small number of women considering pregnancy in the next year, we dichotomized the intention variable as intending pregnancy in the future (46%) versus not intending any future pregnancy (54%) in the main analyses.

Dependent Variable—At the 2-year follow-up interview, women were asked whether they had become pregnant since the first interview. Any pregnancy, regardless of its outcome, was considered an incident pregnancy. Pregnancies occurring in women who were considering future pregnancy at baseline were defined as “intended” pregnancies, and pregnancies occurring in women not considering future pregnancy at baseline were defined as “unintended” pregnancies. Due to the design of our survey questions, our definitions of intended and unintended pregnancy differ from that used by the NSFG. The NSFG defines an intended pregnancy as being wanted at the time of conception, and an unintended pregnancy as being either unwanted (not desired at all) or mistimed (desired at a later time). All reports of intent in the NSFG are based on retrospective recall. Our measure of prospective intent does not allow us to distinguish between on-time and mistimed pregnancies, both of which are classified as intended.

Covariates—Covariates were chosen to reflect the domains in our conceptual framework, noted above. Marital status was defined to capture longitudinal changes in partnership status that could potentially change pregnancy intention and likelihood for pregnancy over the study interval. *Longitudinal marital status* was defined as (1) partnered (married or living with a partner) at both time points (baseline and follow-up), (2) not partnered at baseline but became partnered during the 2-year study period, (3) partnered at baseline but became unpartnered during the 2-year study period, and (4) not partnered at both time points. Our hypothesis was that being or becoming partnered would be positively associated with pregnancy intent and incident pregnancy, compared with not being partnered or becoming unpartnered. *Number of live births* at baseline, defined as 0, 1, or 2 or more live births, was included since pregnancy intention is dependent, in part, on the number of births a woman has already had.

We included baseline health-related variables based on the hypothesis that women with better health status would be more inclined to consider pregnancy and more likely to become pregnant. These variables included *overall health status* as measured by the first item from the SF-12v2 Health Survey (Ware, Kosinski, Turner-Bowker & Gandek B, 2002), comparing those who reported their overall health as excellent or very good vs. good, fair, or poor. A variable indicating the presence of a *chronic health condition* was constructed based on whether the participant reported having been told by a doctor or other health care provider within the past 5 years that she had hypertension, heart disease, diabetes, obesity/overweight, or anxiety/depression.

Sociodemographic variables included *age group* (18–24 years, 25–34 years, and 35–45 years) and *race/ethnicity* (dichotomized as non-Hispanic White vs. other). Due to the small proportion of non-White participants (8%), which mostly represented African-American women, further categorization by race/ethnicity was not possible. Other sociodemographic variables included *education* (dichotomized as high school graduate or less vs. at least some college) and *poverty status* (defined using 2004 U.S. Census definitions based on household income and composition as poverty, near poverty, or not poverty). A proportion of participants (12%) had

missing income data, either because they did not know, were not sure, or refused to report their household income. Further examination of the women with missing income data revealed that they were similar to women in the poverty and near poverty groups in terms of educational attainment and type of health insurance. Women who did not report their household incomes were treated as a separate category in analyses. *Type of health insurance* was categorized as public (mainly Medicaid in this sample), private, or no health insurance; we hypothesized that women with private health insurance would be more likely to intend a future pregnancy because they are more likely to have the resources to cover health care costs associated with pregnancy and childbearing.

Statistical Analysis

Frequencies of the study variables were determined. Bivariate analysis tested the association between the independent variables and pregnancy occurrence using Chi-square tests. We then used multivariable logistic regression to model the association of baseline pregnancy intention with pregnancy occurrence, controlling for the family context, health context, and sociodemographic covariates described above. Interactions between pregnancy intention and all covariates were tested by adding interaction terms as predictors in the multivariable logistic regression model and then testing for their significance using Wald Tests. Significant interactions are presented in the final model. All statistical analyses were performed using SAS software, Version 9.0 of the SAS System for Windows (SAS Institute Inc., Cary, NC).

Results

Characteristics of the full analytic sample and stratified by pregnancy occurrence are shown in Table 1. At the 2-year follow-up interview, 15% of women (n=137) reported having been pregnant at least once in the interval 2 years. In these bivariate analyses, women were significantly more likely to become pregnant during the study if they were partnered at both time points or become partnered during the study ($p<0.0001$), had 1 previous birth ($p<0.0001$), were in the younger age groups ($p<0.0001$), and were non-White ($p=0.04$).

Incident pregnancies were then categorized according to baseline pregnancy intention as shown in Table 2. There was a highly significant association ($p<0.0001$) between baseline pregnancy intention and incident pregnancy during the 2-year study period. Of women considering a future pregnancy at baseline, 28% became pregnant, compared with 5% of women not considering a pregnancy at baseline. Overall, 83% of the incident pregnancies were intended (occurring in women considering a future pregnancy) and 17% were unintended (occurring in women not considering a future pregnancy), according to baseline pregnancy intentions.

Multivariable modeling of pregnancy occurrence during the 2-year follow-up period is shown in Table 3 (beta-coefficients and p-values are shown). Due to a statistically significant interaction between pregnancy intention and age group ($p=0.004$), the final model as shown includes the pregnancy intention and age group interaction terms. No other interactions were significant. Of the other variables in the model, longitudinal marital status was highly associated with pregnancy occurrence, with being partnered at both time points ($p<0.0001$) and becoming partnered during the study period ($p=0.0001$) significantly associated with incident pregnancy compared with women who were not partnered at both time points. Having had one previous live birth ($p=0.05$, compared with 2 or more live births) was also significantly associated with incident pregnancy.

Table 4 details the pregnancy intention and age group interaction by showing odds ratios for the effect of pregnancy intention within each age group. Baseline pregnancy intention was highly associated with incident pregnancy among women in the 25–34 age group (adjusted OR 4.19, 95% CI 2.20–7.97) and the 35–45 age group (adjusted OR 26.89, 95% CI 9.05–79.93),

but not among the youngest (age 18–24) group. An alternative way of describing the pregnancy intention and age group interaction when predicting pregnancy occurrence would be to look at the effect of age group effect within each pregnancy intention category. Looking at the interaction in this manner (data not shown), age group designation did not significantly predict pregnancy occurrence among women considering a future pregnancy, but it was highly associated with pregnancy occurrence among women not considering a future pregnancy. Specifically, among women not considering future pregnancy, women ages 18–24 (adjusted OR 20.82, 95% CI 3.94–109.90) and ages 25–34 (adjusted OR 8.84, 95% CI 3.11–25.12) were significantly more likely to become pregnant, and thus have unintended pregnancies, than women in the oldest age group.

Discussion

This is the first study to assess the association between prospective pregnancy intent and pregnancy occurrence over a 2-year follow-up period. Among pregnancies occurring during the study interval, 83% were intended (occurring in women who were considering a future pregnancy) and 17% were unintended (occurring in women not considering a future pregnancy). Our main finding was that baseline pregnancy intention was strongly associated with pregnancy during the follow-up period when relevant covariates were controlled for, but only in women ages 25 and older. Among women 18–24, intention was not predictive of subsequent pregnancy.

The differential effect of pregnancy intention by age group is an important finding to consider. If older women had been less likely than younger women to become pregnant irrespective of pregnancy intention, that may have simply been explained by age-related declines in fertility. However, we found that compared with younger women, older women were more likely to become pregnant if they were considering future pregnancy and less likely to become pregnant if they were not considering future pregnancy, suggesting that other factors may be driving these results to a greater degree: (1) younger women may have greater ambivalence about pregnancy intention leading to inconsistent decision making regarding contraceptive use, (2) younger women may be more prone to sexual risk taking behavior that increases their likelihood for unintended pregnancy, and (3) older women may be more effective at regulating fertility due to experience and self-efficacy.

This study found that 17% of incident pregnancies were unintended, whereas the NSFG has reported that 50% of U.S. pregnancies are unintended (Finer & Henshaw, 2006). As noted earlier, our definition of unintended pregnancy differs from that of the NSFG in that unintended pregnancies in the NSFG include both mistimed and unwanted pregnancies and our unintended pregnancies only include pregnancies occurring in women who were not considering pregnancy at all (thus analogous to unwanted pregnancies only). In addition, our data are prospective whereas the NSFG relies on retrospective reports of intent. While our estimate of unintended pregnancies cannot be directly compared with that of the NSFG, our findings suggest that it is important for future research to investigate pregnancy intent prospectively and to account for possible changes in intent over time.

We tested whether 3 domains (family and relationship context, health status, and sociodemographics) would predict pregnancy occurrence. Age was the only significant sociodemographic variable, while health status variables did not contribute significantly to the our model of pregnancy occurrence. Family context variables significantly associated with pregnancy occurrence were marital/partner status and parity. Longitudinal marital/partner status was the strongest independent predictor of incident pregnancy, other than baseline pregnancy intention. Parity influenced pregnancy occurrence; having one previous birth (compared with having 2 or more previous births) was associated with incident pregnancy

whereas having no previous births did not. This could reflect the tendency for women to have children close together, so a woman who already has one child may be inclined to have another within a few years, rather than spread throughout her fertile years. It could also suggest that success at avoiding pregnancy is more likely in women who have previously avoided pregnancy or perhaps that nulliparous women are more likely to have compromised fertility.

There are several limitations to this study. First, we only studied pregnancy occurrence over 2 years. Second, several factors likely contribute to pregnancy occurrence which we did not measure in our surveys, such as religious/cultural affiliation, life situation changes, personal/professional goals (e.g. desired educational attainment, job changes, career aspirations, etc.), and additional dimensions of relationship status (relationship stability, the partner's desire for children, frequency of sex, non-monogamy, etc.). Also, it is possible that women changed their intention about future pregnancy during the study interval, which we did not measure. Additionally, there has been underreporting of abortions in national survey data such as the NSFG (Finer & Henshaw, 2006), so it is possible that there was underreporting of pregnancies ending in abortion in our study; we are unable to ascertain whether pregnancies resulting in abortion were not reported or misreported as miscarriages. Finally, while our sample was representative of the target population from which it was drawn, this is a largely white population and our findings may not be generalizable to more diverse populations or to adolescents.

Further work to prospectively characterize pregnancy intentions is needed. Replicating our findings in larger, more diverse samples would provide greater confidence in the predictive validity of pregnancy intent. The implications of our findings for prevention of unintended pregnancy and promotion of preconception care are provocative. For example, our findings suggest that women ages 18 to 24 are at higher risk for unintended pregnancy than older women because pregnancy intentions do not seem to be associated with subsequent pregnancy in this age group; these younger women could be targeted for unintended pregnancy prevention programs. In addition, in order to improve pregnancy outcomes, the Centers for Disease Control and Prevention has recommended preconception care for all women of reproductive age (Centers for Disease Control and Prevention, 2006). However, knowing which women have the greatest likelihood of pregnancy would allow services to be targeted to those most in need. These findings suggest that in women age 25 and over, those intending a future pregnancy should be targeted for preconception care. Better understanding of how pregnancy intentions are formed and how they predict pregnancy incidence could have profound impact on health services.

Acknowledgments

The Central Pennsylvania Women's Health Study (CePAWHS) is funded, in part, under grant number 4100020719 by the Pennsylvania Department of Health. The Pennsylvania Department of Health specifically disclaims responsibility for any analyses, interpretations or conclusions. Dr. Chuang is funded under grant K23HD051634 from the National Institute of Child Health and Human Development. This work would not have been possible without the substantial contributions of our late colleague, Gary A. Chase, PhD. He is greatly missed.

References

- Bankole A, Westoff CF. The consistency and validity of reproductive attitudes: evidence from Morocco. *J Biosoc Sci* 1998;30:439–455. [PubMed: 9818553]
- Bloom T, Curry MA, Durham L. Abuse and psychosocial stress as factors in high utilization of medical services during pregnancy. *Issues Ment Health Nurs* 2007;28:849–866. [PubMed: 17729170]
- Centers for Disease Control and Prevention. Recommendations to improve preconceptional health and health care--United States: a report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. *MMWR* 2006;55:1–22.

- Denavas C. The Hispanic population in the United States: March 1985. *Curr Popul Rep Popul Charact* 1988;1–74.
- dos SantosSilva I, Beral V. Socioeconomic differences in reproductive behaviour. *IARC Sci Publ* 1997;285–308. [PubMed: 9353670]
- Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspect Sex Reprod Health* 2006;38:90–96. [PubMed: 16772190]
- Frost JJ, Singh S, Finer LB. Factors associated with contraceptive use and nonuse, United States, 2004. *Perspect Sex Reprod Health* 2007;39:90–99. [PubMed: 17565622]
- Gesink Law DC, Maclehose RF, Longnecker MP. Obesity and time to pregnancy. *Hum Reprod* 2007;22:414–420. [PubMed: 17095518]
- Joyce T, Kaestner R, Korenman S. The stability of pregnancy intentions and pregnancy-related maternal behaviors. *Matern Child Health J* 2000;4:171–178. [PubMed: 11097504]
- Manlove J. The influence of high school dropout and school disengagement on the risk of school-age pregnancy. *J Res Adolesc* 1998;8:187–220. [PubMed: 12294323]
- National Center for Health Statistics Key Statistics from the NSFG (from A to Z). Hyattsville, MD: [Accessed on August 13, 2008]. <http://www.cdc.gov/nchs/about/major/nsfg/abclist.htm>.
- Parr NJ. Family background, schooling and childlessness in Australia. *J Biosoc Sci* 2005;37:229–243. [PubMed: 15768776]
- Philipov D, Speder Z, Billari FC. Soon, later, or ever? The impact of anomie and social capital on fertility intentions in Bulgaria (2002) and Hungary (2001). *Popul Stud (Camb)* 2006;60:289–308. [PubMed: 17060055]
- Ramlau-Hansen CH, Thulstrup AM, Nohr EA, Bonde JP, Sorensen TI, Olsen J. Subfecundity in overweight and obese couples. *Hum Reprod* 2007;22:1634–1637. [PubMed: 17344224]
- Santelli J, Rochat R, Hatfield-Timajchy K, Gilbert BC, Curtis K, Cabral R, et al. The measurement and meaning of unintended pregnancy. *Perspect Sex Reprod Health* 2003;35:94–101. [PubMed: 12729139]
- Tombleson SB. Diabetes mellitus and fertility. *N Z Med J* 1954;53:230–232. [PubMed: 13194162]
- Trussell J, Vaughan B, Stanford J. Are all contraceptive failures unintended pregnancies? Evidence from the 1995 National Survey of Family Growth. *Fam Plann Perspect* 1999;31:246–247. [PubMed: 10723650]260
- Ware, J.; Kosinski, M.; Turner-Bowker, D.; Gandek, B. Lincoln, RI: QualityMetric Incorporated; 2002. How to score version 2 of the SF-12 Health Survey.
- Weisman CS, Hillemeier MM, Chase GA, Dyer AM, Baker SA, Feinberg M, et al. Preconceptional Health: Risks of Adverse Pregnancy Outcomes by Reproductive Life Stage in the Central Pennsylvania Women's Health Study (CePAWHS). *Womens Health Issues*. 2006
- Williams L, Abma J, Piccinino LJ. The correspondence between intention to avoid childbearing and subsequent fertility: a prospective analysis. *Fam Plann Perspect* 1999;31:220–227. [PubMed: 10723646]
- Williams L, Piccinino L, Abma J, Arguillas F. Pregnancy wantedness: attitude stability over time. *Soc Biol* 2001;48:212–233. [PubMed: 12516225]
- Yang Y, Morgan SP. How big are educational and racial fertility differentials in the U.S.? *Soc Biol* 2003;50:167–187.

Table 1
Baseline characteristics of women ages 18–45, by pregnancy occurrence (n=889).

Characteristics	Total Sample n=889	Incident Pregnancy 15% (n=137)	No Incident Pregnancy 85% (n=752)	p-value [*]
Family Context Variables				
Longitudinal Marital Status				<0.0001
Partnered at both time points	74% (654)	85% (116)	72% (538)	
Not partnered at baseline/Partnered at follow-up	4% (35)	8% (11)	3% (24)	
Partnered at baseline/Not partnered at follow-up	3% (31)	1% (1)	4% (30)	
Not partnered at both time points	19% (167)	7% (9)	21% (158)	
Number of Previous Live Births				<0.0001
0	32% (286)	32% (44)	32% (242)	
1	22% (193)	36% (49)	19% (144)	
2 or more	46% (410)	32% (44)	49% (366)	
Health-Related Variables				
Overall Self-Rated Health Status				0.79
Excellent/Very Good	68% (608)	69% (95)	68% (513)	
Good/Fair/Poor	32% (281)	31% (42)	32% (239)	
Presence of Chronic Health Condition				0.33
Yes	43% (384)	39% (54)	44% (330)	
No	57% (505)	61% (83)	56% (422)	
Sociodemographic Variables				
Age group				<0.0001
18–24	16% (146)	23% (31)	15% (115)	
25–34	40% (358)	63% (86)	36% (272)	
35–45	43% (383)	15% (20)	48% (363)	
Race/Ethnicity				0.04
White (not Hispanic)	92% (819)	88% (120)	93% (699)	
Non-White	8% (67)	12% (16)	7% (51)	
Education				0.53
High School or less	31% (272)	33% (45)	30% (227)	
Some college or more	69% (617)	67% (92)	70% (525)	

Characteristics	Total Sample n=889	Incident Pregnancy 15% (n=137)	No Incident Pregnancy 85% (n=752)	p-value [*]
Poverty Status				0.95
Poverty	7% (62)	8% (11)	7% (51)	
Near poverty	16% (142)	16% (22)	16% (120)	
Not poverty	65% (579)	64% (87)	65% (492)	
Income data not provided (missing)	12% (106)	12% (17)	12% (89)	
Health Insurance				0.59
Public	10% (89)	10% (14)	10% (75)	
Private	79% (705)	77% (105)	80% (600)	
No insurance	11% (95)	13% (18)	10% (77)	

* p-value for Chi-square tests comparing baseline characteristics by pregnancy occurrence.

Table 2
Incident pregnancy by baseline pregnancy intent (n = 889)

	Frequency % (n)	Percent of Women with a pregnancy during 2-year follow-up ^a % (n)	Classification of pregnancies by baseline intent ^b (n = 137 pregnancies)
Baseline Pregnancy intent			
Considering future pregnancy ^c	46% (405)	28% (114)	83% intended
Not considering future pregnancy	54% (484)	5% (23)	17% unintended

^aThe association between baseline pregnancy intent and incident pregnancy is significant ($p < 0.0001$) by the Chi-square test.

^bIntended pregnancies are defined as pregnancies occurring in women considering a future pregnancy at baseline. Unintended pregnancies are pregnancies in women not considering a future pregnancy at baseline.

^cIncludes don't know and undecided responses (n=33).

Table 3
Multiple logistic regression analysis of incident pregnancy*, n=882.

Characteristics	Beta-coefficient (SE)	p-value
Baseline Pregnancy Intention		
Considering a future pregnancy	3.29 (0.56)	<0.0001
Not considering a future pregnancy	Reference	
Family Context Variables		
Longitudinal Marital Status		
Partnered at both time points	1.82 (0.40)	<0.0001
Not partnered at baseline/Partnered at follow-up	2.05 (0.54)	0.0001
Partnered at baseline/Not partnered at follow-up	-0.87 (1.11)	0.44
Not partnered at both time points	Reference	--
Number of Previous Live Births		
0	-0.27 (0.30)	0.38
1	0.54 (0.27)	0.05
2 or more	Reference	--
Health-Related Variables		
Higher Overall Self-Rated Health Status	0.17 (0.24)	0.48
Presence of Chronic Health Condition	0.02 (0.22)	0.93
Sociodemographic Variables		
Age Group		
18-24	3.04 (0.85)	0.0003
25-34	2.18 (0.53)	<0.0001
35-45	Reference	
Race/Ethnicity		
White (not Hispanic)	Reference	--
Non-White	0.69 (0.37)	0.06
Education		
High school or less	Reference	--
Some college or more	-0.09 (0.25)	0.72
Poverty Status		
Poverty	0.11 (0.44)	0.80

Characteristics	Beta-coefficient (SE)	p-value
Near poverty	-0.27 (0.31)	0.38
Not poverty	Reference	--
Income data not provided (missing)	-0.14 (0.35)	0.69
Health Insurance		
Public	Reference	--
Private	0.05 (0.39)	0.91
No insurance	-0.08 (0.46)	0.86
Pregnancy Intention-Age Group Interaction Terms		
Pregnancy intention × 18–24 age group	-2.74 (0.93)	0.003
Pregnancy intention × 25–34 age group	-1.86 (0.64)	0.004
Pregnancy intention × 35–45 age group	Reference	

*McFadden's $R^2=0.24$, C-statistic=0.84

Table 4
Adjusted odd ratios of pregnancy occurrence as predicted by baseline pregnancy intention within age group*.

Baseline Pregnancy Intention Within Age Group	Adjusted OR	95% Confidence Interval
Age 18–24		
Considering a future pregnancy	1.73	0.40–7.41
Not considering a future pregnancy	Reference	Reference
Age 25–34		
Considering a future pregnancy	4.19	2.20–7.97
Not considering a future pregnancy	Reference	Reference
Age 35–45		
Considering a future pregnancy	26.89	9.05–79.93
Not considering a future pregnancy	Reference	Reference

* Adjusted odds ratios and 95% confidence intervals are derived from multiple logistic regression modeling pregnancy occurrence, controlling for longitudinal marital status, number of previous live births, self-rated health status, presence of chronic health condition, race/ethnicity, education, poverty status, and health insurance (n=882 due to listwise deletions).