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Pregnancy Intentions, Long-Acting Contraceptive Use, and Rapid Subsequent Pregnancies among Adolescent and Adult First-Time Mothers

Miranda R. Waggoner, Ph.D.* [Postdoctoral Research Associate],

Office of Population Research, Princeton University

Robin Gaines Lanzi, Ph.D., MPH [Associate Professor], and

Department of Health Behavior, School of Public Health, University of Alabama at Birmingham

Lorraine V. Klerman, Dr. PH

Brandeis University and The Centers for the Prevention of Child Neglect

Abstract

Problem—Greater understanding is needed related to qualitatively-assessed pregnancy intentions and rapid subsequent pregnancies among adolescent and adult mothers.

Methods—4-site prospective study of 227 adolescent and adult mothers. Data analyzed to understand the relationship between pregnancy intentions, adolescent status, and use of long-acting contraceptives and rapid subsequent pregnancy.

Findings—The findings from this study provide evidence of the importance of goal-oriented pregnancy intentions, long-acting contraceptive use, and older age in delaying a second pregnancy.

Conclusion—Findings reveal the need for clinician awareness of the qualitative pregnancy intentions of young women and potential desired use of long-acting contraceptives.

Keywords

adolescent pregnancy; rapid subsequent pregnancy; pregnancy intention

Understanding the risk factors for a rapid subsequent pregnancy, especially among adolescents, is of perpetual public health concern. Some of the negative consequences of teen motherhood can be lessened if the mother delays, or avoids having, a second child (Klerman, 2004). Rapid subsequent pregnancy is defined as a pregnancy occurring within 24 months of the last pregnancy, and experts recommend an interpregnancy interval of at least 24 months to help ensure maternal health and to benefit child development (Department of Health and Human Services, 2001). It is important also for clinicians to be sensitized to adolescents' needs and desires regarding family planning, especially related to timing and intention of a subsequent pregnancy. Mistiming of pregnancies has been found to have more serious health consequences for adolescents than for older women, and most mistimed subsequent pregnancies occur within 24 months of the previous pregnancy (Pulley, Klerman, Tang, & Baker, 2002). Because of this body of research, intentions are often demarcated by whether or not the woman intends to get pregnant within or beyond 24 months. A review of the research on birth spacing, though, found that the most significant

*Corresponding author information: Miranda R. Waggoner, Princeton University, Office of Population Research, 259 Wallace Hall, Princeton, NJ 08544, Tel: (609) 258-5514, Fax: (609) 258-1039, waggoner@princeton.edu.

risk for adverse perinatal outcomes is an interpregnancy interval less than 18 months and greater than 59 months, such that a clinical recommendation of a 2–5 year window between pregnancies is advised (Conde-Agudelo, Rosas-Bermudez, & Kafury-Goeta, 2006).

Pregnancy Intentions

Separate from pregnancy timing, research has suggested that pregnancy intention is a risk factor for rapid subsequent pregnancies in adolescence (Milne & Glasier, 2008). The way in which pregnancy intention is usually measured has been the source of great debate. Few studies have measured pregnancy intention prospectively (Kavanaugh & Schwarz, 2009). One study with a two-year follow-up reported that baseline pregnancy intentions did not predict pregnancy among women aged 18 to 24 but were highly predictive for women age 25 and older (Chuang, Weisman, Hillemeier, Camacho, & Dyer, 2009). A longitudinal study of teen pregnancy intentions highlighted the importance of variability between reported pregnancy plans and reported pregnancy likelihood (Rosengard, Phipps, Adler, & Ellen, 2004). Another study of Latina teens found that pregnancy intention emerged as an independent risk factor for pregnancy (Rocca, Doherty, Padian, Hubbard, & Minnis, 2010). Most studies on pregnancy intention and subsequent pregnancy, though, evaluate non-pregnant women. In one of the few studies to examine prospective intentions for future pregnancies among women who have just given birth, Raneri and Wiemann (2007) found that teen mothers are at an elevated risk of rapid subsequent pregnancy due to multilevel factors, including plans to have another baby within 5 years, not being given a long-acting contraceptive within 3 months of birth, and not being in a relationship with the father.

Contraceptive Behavior

One interview and diary-based study found that pregnancy intentions positively predicted contraceptive behaviors among teens over a three-month period (Bartz, Shew, Ofner, & Fortenberry, 2007). Other research has found that birth intentions among teenagers do not effectively explain contraceptive choices (Stevens-Simon, Sheeder, Beach, & Harter, 2005). Ambivalence with regard to pregnancy intentions presents increased ineffective contraceptive use in some studies (Brückner, Martin, & Bearman, 2004; Iuliano, Speizer, Santelli, & Kendall, 2006). In another study, women who express ambivalence about pregnancy report using less effective contraceptive methods than women who want to avoid pregnancy (Schwarz, Lohr, Gold, & Gerbert, 2007). Ambivalence about pregnancy may have nuanced underlying reasoning, thus linking ambivalence with long-acting contraceptive methods has been recommended (Higgins, Hirsch, & Trussell 2008).

Long-acting Contraceptive Use

While research on the influence of pregnancy intentions on contraceptive behaviors is mixed, the importance of long-acting contraceptives is well-documented. Interventions that help adolescents access contraceptives, in general, do not always help reduce the risk of rapid subsequent pregnancies (Klerman, 2004); this finding points to the importance of long-acting contraceptives. In one important study of teens in maternity programs designed to prevent rapid subsequent pregnancies, long-acting contraceptives were major deterrents to the outcome (Stevens-Simon, Kelly, & Kulick, 2001). Long-acting methods, such as sterilization, intrauterine devices, implants, and injectables, are considered “top tier” contraceptive methods (Hatcher, Trussell, Nelson, Cates, Stewart, & Kowal, 2008). These methods have less discrepancy between typical use and perfect use because they do not rely on active or daily adherence (Trussell, 2011).

Other potential risk factors for rapid subsequent pregnancies include socioeconomic status, race, psychological states such as depression, and father involvement. Studies of the

influence of race and psychological factors have reported conflicting findings. One study found that depressive symptoms among low-income African American teen mothers during the prenatal period presented an independent risk factor for rapid subsequent pregnancy (Barnet, Liu, & DeVoe, 2008). Another study found that poorer mental health experiences were found among low-income, urban teens who experienced rapid subsequent pregnancies than those who do not (Patchen, Caruso, & Lanzi, 2009). A study of black and Mexican American teen mothers found that not being in a relationship with the biological father three months postpartum was a predictor of a subsequent pregnancy within 24 months (Raneri & Wiemann, 2007). Furthermore, high expectations of partner support among low-income women increased the likelihood of using contraceptives (Wilson & Koo, 2008).

This study explores and describes the relationship between qualitative pregnancy intentions, long-acting contraceptive use, and rapid subsequent pregnancies as experienced by 18 months among first-time adolescent and adult mothers without a college degree. A unique aspect of our study is that it includes a comparison group of older mothers matched to adolescents in terms of education and economic levels in order to isolate findings related to age. We hypothesize that goal-oriented pregnancy intentions will be associated with greater use of long-acting contraceptive use and with less occurrence of a rapid subsequent pregnancy. We also hypothesize that adolescents will be less likely than adult women to use long-acting contraceptive methods and more likely than adult women to experience a rapid subsequent pregnancy.

METHODS

The Parenting for the First Time study is a prospective, multi-site study, which included questions about family planning, maternal and paternal characteristics, and child outcomes. Participants were eligible to participate in the study if they had no previous live births. Interviews were conducted by highly trained interviewers, mostly comprised of psychology graduate students and individuals with a background in social work, who had to meet criterion on all standardized assessments. The first interview was conducted during the prenatal period and subsequent data were collected when the baby was approximately 4, 6, 8, 12, 18, and 24 months through person-to-person and cell phone interviews, home observations, and child assessments. Originally, 682 mothers were recruited from primary care facilities in four communities: South Bend, Indiana; Kansas City, Kansas and Missouri; Washington, D.C.; and Birmingham, Alabama. The mothers were divided into three groups: adolescents, aged 15–18 at the time of recruitment ($n = 396$); low-education adults ($n = 169$); and, high-education adults ($n = 117$). The current study excluded high-education adults, so that a comparison could be drawn more directly between mothers of different age but similar socioeconomic status, thus highlighting effects related to age (i.e., being a teen mother) versus educational and economic resources. Moreover, the current study excluded those respondents ($n = 8$) who identified as a race or ethnicity other than black, white, or Hispanic. This was done simply because the numbers were too small for analysis of these categories. We divided the sample further into middle adolescence (ages 14–16), late adolescence (ages 17–19), and adult (ages 22–36).

The current analysis included those women with full data on prenatal variables of interest, outcome data, and with data at the 6-month follow-up because this was the first postpartum assessment that documented contraceptive use in detail. Moreover, ten respondents were removed from the analysis because they reported being pregnant again by the 6-month follow-up; concurrent measurement of contraceptive data would confuse analyses. Permission to conduct the study was obtained from the Institutional Review Board (IRB)s at the four participating sites and at Brandeis University. IRB status was not obtained for

contraceptive questions directed to the under-18 population in Kansas City; thus, these participants were not included in the analyses.

The final analytic sample included 227 respondents with complete baseline, 6 month, and 18 month data. Those respondents who were counted in the analytic sample did not differ significantly from those who were not part of the analytic sample in terms of age ($p=0.47$), expected father contribution ($p=0.67$), depression scores ($p=0.62$), or pregnancy intention ($p=.10$). There was a significant difference in terms of race, with black respondents comprising more of the group that was not included in analysis (74.5%) than the analytic sample (62.1%). However, because black respondents are overrepresented as a population in this study, we do not see this as a drawback to the analytic sample.

Study Variables

Pregnancy intention was measured prenatally and prospectively by multiple questions. During the prenatal assessment, the respondent was asked when she would like to get pregnant again. This open-ended question was filled in verbatim as text in the data set. The respondent was then asked to confirm whether or not she desired another pregnancy or did not know. She was also given the option to fill in the age at which she would next like to get pregnant. Thus, we draw on several variables to establish pregnancy spacing intentions. Those respondents who did not want to get pregnant again were coded as “never.” Qualitative answers were examined and coded to capture those respondents who were at risk of a rapid subsequent pregnancy and those respondents who actively desired to delay another pregnancy. If the respondent stated that she wanted to wait for a goal or a specific amount of time (e.g., “I want to wait until I finish college;” “I want to wait until I get married;” “I want to wait 3 years”), her pregnancy intention was coded as “goal-oriented.” These goals were checked for consistency with the age at which she reported she would like to get pregnant again. Open-ended responses about when the respondent would like to get pregnant again that were not goal-oriented (e.g., “In the future;” “Later”) were coded in the third category as “vague.” We conceive of this last category as encompassing the “at risk” respondents, therefore, also included in this category are those who expressed that they were unsure or ambivalent about whether they wanted another pregnancy as well as those few respondents who expressed that they would like to become pregnant again within the next 18–24 months. Thus, we focus here on three groups: those respondents who “never” want to become pregnant again, those respondents who are “goal-oriented” in their intentions to become pregnant again later than 18 months, and those respondents who we define as “at risk” of experiencing a pregnancy in the next 18 months.

At the 6-month follow-up assessment, respondents were asked whether they were using any family planning method and, if so, which method. Those who reported sterilization, Norplant, implants, IUD, Depo-Provera, or injectables were coded as users of long-acting contraceptives. Those who reported using birth control pills, condoms, diaphragm, the patch, sponge, abstinence, withdrawal, tempsafe, vaginal pouches, foam, suppository, “morning after” pills, or the rhythm method were coded as using “other” birth control methods.

Race/ethnicity was self-reported and coded as black, white, or Hispanic. Expectations about father involvement were captured with one question in the prenatal assessment that asked the mother whether the father of the child will help with child care on a regular basis. Expectations about helping with child care represent a proxy for whether the mother thinks the father will be involved with the baby. This expectation could have been broadly construed, from anything to helping to pay for child care to actively engaging in child care.

Self-efficacy and depression were established with total scores at the prenatal assessment. Maternal parenting self-efficacy was measured prenatally, using the Pearlin Self-Mastery

and Parenting Self-Efficacy measure (Pearlin & Schooler, 1978). The questionnaire contained a total of 13 items with 7 addressing self-mastery. The responses were coded 1–7, from “disagree strongly” to “agree strongly.” This scale is designed to measure the mothers’ general feelings about how well she deals with problems, with a higher score indicating the respondent’s perception of her ability to successfully master problems (possible score range, 13–91). The Pearlin Mastery Scale has an internal consistency of .71–.81 (Perrin & McDermott, 1997). Maternal depression, measured prenatally, was treated as a continuous measure and based on the BDI-II, a new edition of the Beck Depression Inventory that indicates depressive symptomology, not a diagnosis of clinical depression (Beck & Steer, 1984). The measure consists of 21 items; respondents indicated severity of a variety of depressive symptoms, with clinical ratings of minimal, mild, moderate, or severe depression. The BDI-II was found to have reliability coefficient alphas of .92 (Beck, Steer, & Brown, 1996). For the purposes of this analysis, respondents were coded as having depression scores of minimal, mild, or moderate to severe.

For both self-efficacy and depression, Response-Function Imputation (Sijtsma & van der Ark, 2003) was used to replace individual items necessary to calculate total scores for those missing less than 30% of the item responses. Response-Function Imputation (RFI) calculates missing scores based on estimated probabilities using data from participants with completely observed data, taking into account differences both among respondents and items. This method is appropriate for items of the same scale which measure the same construct.

A main variable of interest in this study was whether the respondent experienced a rapid subsequent pregnancy within 18 months of the index delivery. This was determined by a self-report of subsequent pregnancy by 18 or 24 months. At each assessment, the respondent was asked whether she had had another baby since her first baby was born. She was also asked at each assessment whether she is currently pregnant or has been pregnant at all since the birth of her first baby. These questions allowed for consistency checks across reports. For example, if a respondent reported a pregnancy by 18 months, she also should have reported a pregnancy by 24 months (whether or not the pregnancy was continued). Some missing data on the 18-month outcome question was back-filled by 24-month assessment data (i.e., first, if the respondent had not experienced any subsequent pregnancy by 24 months, she was designated as not having experienced a subsequent pregnancy by 18 months; second, if the respondent had already given birth to a second baby by the 24-month assessment, she was recorded as having been pregnant at 18 months).

Analysis

Descriptive statistics show the sample characteristics and the relationship between reported pregnancy intentions, long-acting contraceptive use, and subsequent pregnancies among adolescents and adults. Bivariate analyses (test for equality of variances and means or chi-square) were used to find those variables associated with contraceptive use (specifically the use of a long-acting contraceptive at 6 months) and the outcome of a rapid subsequent pregnancy by 18 months. The select independent variables outlined above were entered into a basic multivariate logistic regression to examine predictors of a rapid subsequent pregnancy. Collinearity diagnostics, using the variance inflation factor (VIF) measure, ruled out any collinearity concerns with predictor variables.

RESULTS

Descriptive Results

The analytic sample ($n = 227$) was comprised of two groups of adolescents, aged 14–16 (23.8%) and 17–19 (43.2%), and one group of adults aged 22–36 (33.0%). In terms of race/

ethnicity, the sample was comprised of 16.3% white respondents, 62.1% black respondents, and 21.6% Hispanics (Table 1). A majority (72.7%) of the women reported during the prenatal period that they expected the father of the baby to be involved and to contribute. At the prenatal assessment, 58.1% of the sample scored a minimal depression clinical rating; 25.6% scored a mild depression clinical rating; 16.3% were recorded as having moderate to severe depression. A significant association ($p < .01$) emerged between expected father involvement and prenatal depression score, such that those who did not expect father involvement were more likely to report moderate to severe depression. With the possible range of scores on self-efficacy and self-mastery as 13–91, the respondents' scores ranged from 46 to 91. The mean prenatal score on self-efficacy and mastery was 76.74, indicating a mildly positive assessment of self-efficacy and self-mastery (Table 1).

Qualitative Pregnancy Intentions

During the prenatal assessment, 38.8% of the pregnant adolescent and adult mothers reported that they never wanted to get pregnant again. Interestingly, 41.4% of pregnant women indicated that they wanted to get pregnant again but were goal-oriented about when they wanted to get pregnant again. One out of five of the pregnant women (19.8%) indicated that they were ambivalent or vague about another pregnancy, such that they did not express a goal about when to get pregnant again or were not trying to avoid getting pregnant in the next 18 months (the “at risk” group) (Table 1). The older adolescent mothers (aged 17–19) were more likely to report that they never wanted to get pregnant again (Table 2).

Contraceptive Use

At the 6-month follow-up, 26% of the adolescent and adult mothers reported that they were using no form of birth control; 27.8% of the sample reported using a long-acting contraceptive method; and, the remainder (46.3%) reported using some other type of birth control (Table 1). The teen and adult mothers only differed significantly in the use of contraceptives at 6 months, with the adult mothers being less likely to use a long-acting contraceptive and more likely to use another form of birth control than the teen mothers (Table 2).

Those using a long-acting contraceptive were significantly more likely to be in the teen groups than the adult group. Those expecting the father to contribute to the child's care were more likely to use a long-acting contraceptive at 6 months than not, although this difference was not significant. There was no significant difference among depression rating and long-acting contraceptive use, as there was no significant association between self-efficacy and long-acting contraceptive use.

Intentions and Contraceptive Use

Those using a long-acting contraceptive at 6 months were significantly more likely to be goal-oriented in their pregnancy intention status, whereas those not using a long-acting contraceptive at 6 months were more likely to have an ambivalent/at risk pregnancy intention status than those using a long-acting contraceptive (Table 3). Significantly more of the 14–16 year olds (35.2%) than the 17–19 year olds (31.6%) and adult mothers (17.3%) were using a long-acting contraceptive at 6 months (Table 2). Among the white respondents, 13.5% were using a long-acting contraceptive at 6 months, whereas 32.6% of black respondents and 24.5% of Hispanics were using a long-acting contraceptive at 6 months ($p < .10$).

Of those who never wanted to get pregnant again, 28.4% were using a long-acting contraceptive at 6 months, while 34% of those who were goal-oriented were using a long-acting contraceptive at 6 months. Only 13.3% of the “at risk” group were using a long-acting

contraceptive at 6 months ($p < .05$). Of those who never wanted to get pregnant again, 21.6% were pregnant again by 18 months. Of those who were in the “at risk” intention group, approximately 31% were pregnant again by 18 months. Of those who were goal-oriented in their prenatal intention reports, 17% were pregnant again by 18 months. Further dividing the sample by those who never intended to have another pregnancy versus all others did not return significant differences in long-acting contraceptive use at 6 months or in the outcome of a rapid subsequent pregnancy. We did not find a significant difference in the use of long-acting contraceptives between the percentage of those who never wanted to get pregnant again (28.4%) versus all other intention statuses (27.3%).

Rapid Subsequent Pregnancies

Of the 14–16 year olds, 29.6% experienced a pregnancy by 18 months, as had 21.4% of the 17–19 year olds and 16% of the adult women. The adult mothers were less likely to experience a rapid subsequent pregnancy, although the differences between groups were not significant (Table 2). Among Hispanic respondents, 18.4% experienced a pregnancy by 18 months, whereas 21.6% of white respondents and 22.7% of black respondents experienced another pregnancy by 18 months. These racial/ethnic differences in the outcome of a rapid subsequent birth were not significant. Those who experienced a rapid subsequent pregnancy by 18 months were more likely to report using no contraceptive method than those who did not experience a rapid subsequent pregnancy. Further, there was a significant association between those using a long-acting contraceptive method and delaying a subsequent pregnancy (Table 3). Of those women not using any contraceptive method by 6 months, 30.5% had a pregnancy by 18 months. Of those reporting use of a contraceptive method other than a long-acting method, 22.9% had a subsequent pregnancy by 18 months; and, about 11% of those using a long-acting method reported a pregnancy within 18 months ($p < .05$).

The multivariate analysis, using rapid subsequent pregnancy as the dependent variable, revealed that being in the 14–16 age group increased the risk of experiencing a rapid subsequent pregnancy by over two-fold as compared to the adult women (95% confidence interval, 1.10 – 6.68). Using a long-acting contraceptive at 6 months, as compared to those using no method, decreased the risk of experiencing a rapid subsequent pregnancy by 70% (95% confidence interval, 0.11 – 0.82).

DISCUSSION

We were interested in whether qualitative prenatal pregnancy intention status is associated with the use of a long-acting contraceptive at 6-months postpartum and whether maternal age, pregnancy intention status, or use of a long-acting contraceptive at 6-months postpartum are associated with the outcome of a rapid subsequent pregnancy at 18 months.

Most studies use a 24-month demarcation to study rapid subsequent pregnancy (Pulley, Klerman, Tang, & Baker, 2002). Because of the higher risk to optimal maternal and child health outcomes when an interpregnancy interval is only 18 months (Conde-Agudelo, Rosas-Bermudez, & Kafury-Goeta, 2006), the current study highlights the importance of risk factors for rapid subsequent pregnancy as defined by occurrence within 18 months. Almost 30% of the younger teens in this sample became pregnant again within 18 months of the birth of their first child, as opposed to 21% of the older teens and 16% of the adults. Because the adult mothers in this sample were matched with the teen mothers in terms of low-educational attainment and ethnicity, our findings point to the fact that young age, irrespective of education, does still appear to make a difference. Race/ethnicity did not emerge as a significant factor in the likelihood of planning a pregnancy, using a long-acting contraceptive, or experiencing a rapid subsequent pregnancy. Other research corroborates

this finding that the youngest teens are at an increased risk for unintended rapid subsequent pregnancy and that African Americans and Hispanic teens are no more likely to experience a rapid repeat pregnancy than white teens (Boardman, Allsworth, Phipps, & Lapane, 2006).

This study's findings did not reveal a significant association between expected father contribution and contraceptive use or the experience of a rapid subsequent pregnancy. Moreover, we did not find maternal depression to be associated with rapid subsequent pregnancies (Crittenden, Boris, Rice, Taylor, & Olds, 2009).

Our findings point to the importance of providing advice to the mother past the very early postpartum period and making sure that, if she wants to delay or avoid a second pregnancy, she has access to long-acting contraceptive methods during and beyond the early postpartum period. These findings may point to the importance of advice from health care practitioners, including nurses and other clinicians, which a new mother may receive in the first year of the baby's life.

The adult mothers in this sample were more likely to be using a method of birth control other than a long-acting method. Because adult women reported less long-acting contraceptive use but were at less risk for subsequent pregnancy than other mothers, perhaps older women have more ability to access and pay for contraceptive methods that are not long-acting. They also may be more likely to adhere to their use. Long-acting contraceptives may be even more important for adolescents in delaying a subsequent pregnancy than for adults. However, our findings show that more of the younger teens were using a long-acting method at 6 months (35.2%) than were using no method (33.3%) or another contraceptive method (31.5%). The older teens and the adults were more likely to report using a contraceptive method other than a long-acting one. The younger teens were nevertheless still at greatest risk of experiencing a rapid subsequent pregnancy.

A unique aspect of this study is how qualitative intentions were accounted for, such that the mothers were urged to give an open-ended response to explain their intention, if at all, for a subsequent pregnancy. Unlike previous findings (Rocca, Doherty, Padian, Hubbard, & Minnis, 2010), dividing the current sample into those who said "never" and all others did not produce any significant effects at the bivariate or multivariate level of analysis. By further dividing the group of responses that indicated desire to have another pregnancy into "goal-oriented" and "at risk," differences were delineated. There was a significant association between having a goal-oriented intention and using a long-acting contraceptive at 6 months postpartum. Clinicians should be attuned to nuanced definitions of pregnancy intentions from clients; young women may proclaim that they never want to have another pregnancy when they do not want another pregnancy in the near future.

The findings of this paper suggest that most women in each age group desire another pregnancy and that those who expressed a desire to wait for a specific goal were more likely to use a long-acting contraceptive than those who reported that they never wanted to get pregnant again. There was not, however, a significant association between these intention categories and the outcome of a rapid subsequent pregnancy. Moreover, we did not find a significant difference in intention status by age groups. This indicates that intention status, especially as manifested in a goal-oriented manner, may matter for all new mothers in terms of their contraceptive choices and decisions.

Limitations

This study measured qualitative pregnancy intentions for a subsequent birth during the prenatal period of a first birth. This analysis did not consider social desirability on the part of participant's responses, such that some women may have explained their pregnancy

intentions to fit prevailing social norms related to birth spacing. While we assessed contraceptive use at 6 months postpartum, we did not account for whether respondents had long-acting contraceptives removed during the study period. Our outcome of a rapid subsequent pregnancy was analyzed only in relation to those respondents who have had one birth, which was not necessarily a result of their first pregnancy. Data were not available on whether the first-time mothers in this sample had experienced previous pregnancies. Despite these limitations, this study points to findings that should push forward the literature on pregnancy intentions, contraceptive use, and rapid subsequent pregnancies. Namely, this study points to the potential importance of goal-oriented intentions and their interactions with contraceptive choice and subsequent pregnancies.

CONCLUSION

The findings from this study provide evidence of the importance of long-acting contraceptive use, as well as older age, in delaying a second pregnancy. We believe that future research should attend to the impact of qualitatively-assessed pregnancy intentions on rapid subsequent pregnancies, since giving women the opportunity to explain complicated desires may capture pregnancy goals better than simple categorical responses. Clinicians and policies should take note of the enduring risk of being a younger adolescent in terms of experiencing a rapid subsequent pregnancy. Interventions also need to highlight the reduction in risk of a rapid subsequent pregnancy gained from use of a long-acting contraceptive in the early postpartum period, especially since awareness of long-acting contraceptives is rare among adolescents (CDC 2011). Supporting a woman's goals for her next pregnancy could be an important way to engage in a conversation about how she wants to achieve that goal vis-à-vis her access to, and attitude toward, long-acting contraceptives. Understanding a new mother's own nuanced qualitative assessment of her future pregnancy desires in the clinical setting may be a more thoughtful and productive way to achieve public health goals rather than simply giving women abstract recommendations about pregnancy spacing.

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Table 1

Descriptive Statistics

Characteristic	Total (n = 227)
Age	
14-16	23.8
17-19	43.2
22-36	33.0
Race/Ethnicity	
White	16.3
Black	62.1
Hispanic	21.6
Expecting father contribution	72.7
Prenatal depression rating	
Minimal	58.1
Mild	25.6
Moderate to severe	16.3
Mean prenatal self-efficacy score [‡]	76.74
Intention status for next pregnancy	
Never	38.8
Goal-oriented	41.4
Ambivalent/at risk	19.8
6-month contraceptive use	
No method	26.0
Long-acting contraceptive use	27.8
Other contraceptive use	46.3
Rapid Subsequent Pregnancy by 18 months	21.6

[‡]Range, 46-91; higher score indicates greater perception of self-efficacy.

Data are percentages unless otherwise noted.

TABLE 2
 Baseline characteristics, 6-month contraceptive use, and rapid subsequent pregnancy by maternal age (n = 227)

Characteristic	Age 14–16 (n = 54)	Age 17–19 (n = 98)	Age 22–36 (n = 75)	Chi-square or t-test
Race/Ethnicity				2.26
White	16.7	14.3	18.7	
Black	57.4	67.3	58.7	
Hispanic	25.9	18.4	22.7	
Expecting father contribution	68.5	69.4	80.0	3.03
Prenatal depression rating				7.54
Minimal	48.1	56.1	68.0	
Mild	37.0	24.5	18.7	
Moderate to severe	14.8	19.4	13.3	
Intention status for next pregnancy				6.14
Never	37.0	43.9	33.3	
Goal-oriented	42.6	42.9	38.7	
Ambivalent/at risk	20.4	13.3	28.0	
6-month contraceptive use				10.56*
No method	33.3	21.4	26.7	
Long-acting contraceptive use	35.2	31.6	17.3	
Other contraceptive use	31.5	46.9	56.0	
Subsequent Pregnancy by 18 months	29.6	21.4	16.0	3.45

* p<.05.

Data are percentages unless otherwise noted.

Table 3

Associations between independent and outcome variables of interest (n = 227)

Characteristic	Using long-acting contraceptive (n = 63)	Not using long-acting contraceptive (n = 164)	Chi-square or t-test	Subsequent Pregnancy (n = 49)	No subsequent pregnancy (n = 178)	Chi-square or t-test
Age			6.28*			3.45
14-16	30.2	21.3		32.7	21.3	
17-19	49.2	40.9		42.9	43.3	
22-36	20.6	37.8		24.5	35.4	
Race/Ethnicity			5.67			0.40
White	7.9	19.5		16.3	16.3	
Black	73.0	57.9		65.3	61.2	
Hispanic	19.0	22.6		18.4	22.5	
Expecting father contribution	79.4	70.1	1.96	65.3	74.7	1.72
Prenatal depression rating			0.095			1.79
Minimal	57.1	58.5		55.1	59.0	
Mild	27.0	25.0		22.4	26.4	
Moderate to severe	15.9	16.5		22.4	14.6	
Mean prenatal self-efficacy score [‡]	76.44	76.85	0.29	76.92	76.69	-0.15
Intention status for next pregnancy			6.54*			3.57
Never	39.7	38.4		38.8	38.8	
Goal-oriented	50.8	37.8		32.7	43.8	
Ambivalent/at risk	9.5	23.8		28.6	17.4	
6-month contraceptive use						6.96*
No method				36.7	23.0	
Long-acting contraceptive use				14.3	31.5	
Other contraceptive use				49.0	45.5	
Subsequent Pregnancy by 18 months	11.1	25.6	5.65*			

* p<.05.

[‡]Range, 46-91; higher score indicates greater perception of self-efficacy.

Data are percentages unless otherwise noted.

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