Black-White Differences in Pregnancy Desire During the Transition to Adulthood

Jennifer S. Barber, Karen Benjamin Guzzo, Jamie Budnick, Yasamin Kusunoki, Sarah R. Hayford, and Warren Miller

ABSTRACT This article explores race differences in the desire to avoid pregnancy or become pregnant using survey data from a random sample of 914 young women (ages 18-22) living in a Michigan county and semi-structured interviews with a subsample of 60 of the women. In the survey data, desire for pregnancy, indifference, and ambivalence are very rare but are more prevalent among Black women than White women. In the semi-structured interviews, although few women described fatalistic beliefs or lack of planning for future pregnancies, Black and White women did so equally often. Women more often described fatalistic beliefs and lack of planning when retrospectively describing their past than when prospectively describing their future. Using the survey data to compare prospective desires for a future pregnancy with women's recollections of those desires after they conceived, more Black women shifted positive than shifted negative, and Black women were more likely to shift positive than White women-that is, Black women do not differentially retrospectively overreport prospectively desired pregnancies as having been undesired before conception. Young women's consistent (over repeated interviews) prospective expression of strong desire to avoid pregnancy and correspondingly weak desire for pregnancy, along with the similarity of Black and White women's pregnancy plans, lead us to conclude that a "planning paradigm"-in which young women are encouraged and supported in implementing their pregnancy desires—is probably appropriate for the vast majority of young women and, most importantly, is similarly appropriate for Black and White young women.

KEYWORDS Racial inequality • Racial disparities • Unintended pregnancy • Undesired pregnancy • Unplanned pregnancy

Introduction

According to nationally representative survey data, Black-White disparities in unintended pregnancy in the United States are large. Black women retrospectively report that 64% of their pregnancies are unintended; the corresponding percentage for White women is only 38% (Finer and Zolna 2016). The unintended pregnancy rate is nearly 2.5 times higher for Black women (79 per 1,000) than for White women (33 per 1,000) (Finer and Zolna 2016). These large race disparities, as well as high overall levels of unintended pregnancy, have prompted ongoing public health efforts to reduce unintended pregnancies as well as growing questions about whether women actually form pregnancy intentions and plans (Aiken et al. 2016; Gómez et al. 2019). In particular, persistent race differences in unintended pregnancy rates motivate a closer examination of how the concept and its measurement differ for Black and White women.

If Black women are less able to fulfill their childbearing desires¹ than White women, this is an important reproductive justice issue. However, some researchers have argued that the apparent Black-White disparity in undesired pregnancy arises from misunderstanding Black women's pregnancy desires. For example, it may be that young Black women want to get pregnant but tend to retrospectively report those pregnancies as undesired because they are reluctant to admit that they wanted a child (Dash 2003; Kearney and Levine 2012). Alternatively, Black women may be more likely than White women to have pregnancy desires that fall somewhere between clearly wanting or not wanting, and dichotomous measures tend to categorize those in-between pregnancies as undesired (Borrero et al. 2015; Kemet et al. 2018). Conceptually distinct, Black women may have similar desires as White women for pregnancy or to avoid pregnancy but may be less likely to make plans to implement their desires. Finally, a possibility that has largely been ignored is that Black women's feelings about their pregnancies may shift to become more negative over the course of their pregnancy or after their child is born, relative to White women's more stable or positively shifting feelings about their pregnancies, particularly if they experience discrimination or other negative responses to their pregnancies. Any of these possibilities could lead to an overestimate of racial inequality in undesired pregnancy.

To address this gap in knowledge, we consider four research questions. First, we address whether young Black women prospectively (before conception) express more desire for a pregnancy than White women. Second, we consider whether Black women's prospective pregnancy desire is more frequently ambivalent or indifferent toward pregnancy than White women's. Third, we ask whether Black women's pregnancy plans are qualitatively different than White women's pregnancy plans. Fourth, we test whether pregnant Black women's prospective desires for pregnancy are more likely than pregnant White women's desires to shift negative after they conceive.

We draw on two types of data to measure pregnancy desires and plans: (1) unique survey measures of prospective desire *for* pregnancy and desire to *avoid* pregnancy, and (2) in-person semi-structured interviews about women's feelings surrounding past and future pregnancies. We focus on a particularly important point in the life course: the transition to adulthood, at ages 18–22, when undesired pregnancy rates are the highest (Finer and Zolna 2016).

Pregnancy Desires and Intentions: The TDIB Framework

Our conceptualization of pregnancy desires and plans is based on the Traits-Desires-Intentions-Behavior (TDIB) framework (Miller 1994). The TDIB framework incorporates

¹ The most commonly used measures of "unintended" childbearing (in the National Survey of Family Growth) ask whether women *wanted* to get pregnant (pregnancy *desire*, not *intention*). Our use of "undesired" is consistent with other research (e.g., see Kost and Zolna 2019; Kost et al. 2018). We discuss this language further in the next section.

elements of long-standing theories of childbearing behavior, including demographic demand-for-children models (e.g., Bulatao and Lee 1983), microeconomic models of fertility (e.g., Bagozzi and van Loo 1978), subjective-expected utility models (e.g., Townes et al. 1977), and the theory of reasoned action (Fishbein and Azjen 1975).

This framework describes a four-part motivational sequence. The first part involves largely unconscious childbearing motivational dispositions—namely, traits. (They are not our focus in this article.) Second, these motivational dispositions influence conscious desires for and/or against getting pregnant and having a baby. Third, childbearing desires influence intentions (plans) to try to get pregnant or to avoid getting pregnant. Fourth, intentions lead to specific behaviors that are designed to achieve or avoid pregnancy.

Desires take many forms, from deep urges or gut feelings to explicit formulations of wants. Pregnancy desires, the central concept in this article, reflect whether and how much a woman wants to get pregnant in a specific timeframe. They are driven in part by traits but also by life cycle factors (e.g., age, marital status) and other specific facilitating or competing desires (e.g., for a loving spouse, a college degree, a fulfilling career). Extensive psychological research has supported the existence of two primary dimensions of desires: positive (perceived rewards) and negative (perceived threats) (Cacioppo et al. 1999; Miller 1994; Stanley and Meyer 2009). The TDIB model draws on this research in conceptualizing ambivalence as simultaneous strong positive and strong negative desires for childbearing, and indifference as simultaneous weak positive and weak negative desires for childbearing. Both of these conflicting states are strong predictors of subsequent inconsistent contraceptive use and pregnancy among young women (Miller et al. 2013; Moreau et al. 2012).

In contrast to desires, *intentions* are fully conscious decisions or plans about how to *behave* to achieve a specific outcome. Desires must be translated into intentions before any relevant action is taken.² Of course, individuals vary in their willingness and ability to convert desires into plans. First, conflicting desires (e.g., ambivalent or indifferent pregnancy desire), or desires for other behaviors that conflict with (e.g., college) or support (e.g., marriage) pregnancy, may impede the translation of either desire into plans. Second, particularly for behaviors that require a partner, intentions incorporate what others desire (e.g., the intimate partner). Third, intentions are constrained by what an individual thinks is actually possible. For example, a woman may want to delay childbearing but have fatalistic views about pregnancy planning, believing that God or other forces determine when pregnancy will occur.

We distinguish between desires and intentions for two reasons. First, desire is what researchers commonly measure—asking what a woman wants or wanted rather than asking about what she intends or plans to do. We join other researchers in their call for using accurate language to describe the concept being measured (Kost and Zolna 2019), particularly because referring to a pregnancy that a woman did not want as "unintended" rather than "undesired" implicitly and erroneously attributes a lack of planning or decision-making to the pregnant woman (Potter et al. 2019). Black women's higher levels of "unintended" (sic) childbearing is likely one reason why researchers have suggested that Black women are less planful than White women in terms of pregnancy, despite the many other reasons that Black women may not get

² Miller noted that an intention is formed even with impulsive actions. What differentiates impulsive actions is that the corresponding desire arises suddenly and forcefully, overwhelming prior intentions (Miller 1994:231).

what they want. Second, from a reproductive justice perspective, it is important to ask whether Black women get what they want as frequently as White women, before their intentions, decisions, plans, and behavior are shaped by differential access to opportunities as a result of structural racism (Bloome 2014; Broman 2005; Pager et al. 2009; Raley et al. 2015; Western et al. 2012; Wilson 2012).

Potential Race Differences in Desire for Pregnancy

Our first research question examines the extent to which young Black women have more or less desire for pregnancy than their White counterparts, drawing on Arline Geronimus' influential ideas about *weathering*, a biopsychosocial framework for understanding early health deterioration among Black Americans due to discrimination and stress (Geronimus 1992, 2003; Geronimus et al. 2006). Geronimus used this framework to explain why older Black women have less healthy births (e.g., lower birth weight and higher infant mortality) than Black women who enter motherhood at younger ages, as well as why different racial/ethnic minority groups tend to become parents at ages that minimize their group-specific health risks (Geronimus 1987, 1992). If young Black women are aware of the potential negative consequences of delaying childbearing, they may *want* to enter motherhood while young to maximize their chances of a healthy pregnancy and birth. In addition, given higher morbidity and mortality rates earlier in the life course among Black relative to White people, a younger age at first birth may also maximize the chances that grandparents and other family members are available to help care for and interact with the baby.

Even young Black women with high educational aspirations may prefer younger first births if they are aware that highly educated Black women also experience weathering (Geronimus et al. 2006; Schoendorf et al. 1992). Although young childbearing might reduce their educational attainment, Black women face more limited opportunities for education than White women. Further, most causal analyses have demonstrated only small negative consequences of teen childbearing on educational outcomes, and few, if any, negative consequences for parenting quality (Fletcher and Wolfe 2009; Geronimus and Korenman 1992; Hotz et al. 2005; Kane et al. 2013; Lee 2010). Consequently, what economists call "opportunity costs" of young childbearing are likely lower for Black women.

A second, related reason that young Black women (as well as older Black women) may have a stronger desire for motherhood than White women is that they disproportionately live in impoverished neighborhoods (Lichter et al. 2012), and uncertainty and instability are endemic to this concentrated poverty. Burton and Tucker (2009) and Levine (2013) described the instability and insecurity that pervade the lives of poor Black women: employment opportunities that are limited to intermittent and low-wage jobs, few alternatives to reduce their breadwinner burden (e.g., stably employed husbands), transient living conditions, anxiety about serious relationships, fear of death, and general mistrust. Because women view children as an available path to stability for themselves and hopefully for the fathers as well, motherhood is valued and sought after (Burton 1990; Edin and Kefalas 2005). This is also consistent with demographers' "uncertainty reduction" theory that having children is a key source of stability for individuals whose other options for making life seem more pre-

607

dictable and secure (e.g., marriage, careers, retirement savings) are limited (Friedman et al. 1994).³ Thus, women living in uncertain conditions, such as those experienced by many Black women in the United States, may desire pregnancy at a younger age than other women. Because of residential segregation and discrimination, even at high levels of income or education, these race differences may exist regardless of socioeconomic characteristics.

Weathering and uncertainty/instability form the basis of our first hypothesis:

Hypothesis 1: Black women have more desire for pregnancy (and correspondingly less desire to avoid pregnancy) during young adulthood than their White counterparts.

However, women's feelings about pregnancy are complex, and there has been considerable debate about their appropriate measurement (Klerman 2000; Kost and Lindberg 2015; Rackin and Morgan 2018; Santelli et al. 2003, 2009), which leads to our second research question—whether the concept of pregnancy desire itself is equally complex across groups of women (Borrero et al. 2015; Foster et al. 2008; Moos et al. 1997; Stones et al. 2017). For example, Kemet and colleagues (2018:314) recently wrote that "pregnancy intention (sic) may not be entirely representative of the multidimensional and intersecting social, emotional, cognitive and contextual aspects of pregnancy intention (sic) may offer an incomplete representation of *Black and Hispanic women* in particular" (emphases added). They argued that racial/ethnic differences in the social acceptability of and expectations for young pregnancy render attempts to measure pregnancy desires or intentions less meaningful for Black and Hispanic women than for White women, presumably because their social contexts are so different.

In this perspective, Black communities' support of young parenthood could encourage young Black women to desire early births, especially because parenthood norms are buttressed by higher rates of religiosity and religious attendance in Black communities and the corresponding pro-family and pro-childbearing orientation of religious groups (Chatters et al. 2009; Lincoln and Mamiya 1990; Mollborn 2017; Steensland et al. 2000). Thus, if young Black women simultaneously internalize these local norms *and* conflicting societal norms against young parenthood, they may have ambivalence positive *and* negative feelings—about young pregnancy (Mollborn 2017; Sennott and Yeatman 2018). Indeed, researchers have described high levels of ambivalence among urban minority women (Aiken and Potter 2013; Cutler et al. 2018; Yoo et al. 2014). Alternatively, if the conflicting messages cause them to internalize *neither* set of norms, indifference about young pregnancy may be the result. Thus, our second hypothesis is as follows:

Hypothesis 2: Young Black women are more indifferent and/or ambivalent about pregnancy than their White counterparts.

³ There is also a long history of macro-level hypotheses about temporal, rather than geographic, variation that fertility increases during stable prosperous economic periods and decreases during the uncertain/unstable periods of economic downturns (for a review, see Sobotka et al. 2011). However, consistent with our hypothesis and the uncertainty reduction assumption's individual-level focus, other researchers have found an interaction effect with education: highly educated women postpone parenthood in times of uncertainly, whereas those with less education respond to uncertainty by entering parenthood (Kreyenfeld 2010).

Additionally, there is general concern that the concepts of intentions or planning apply primarily to White women, with their corresponding socioeconomic advantage. In a recent theoretical critique of what they call the "planning paradigm," Aiken and colleagues (Aiken et al. 2016) argued that the entire concept of pregnancy planning, and thus attempts to measure unintended or unplanned pregnancy, are largely inapplicable for some groups. Similar to the arguments about mixed messages described in the previous paragraph, they argued that complexity and fluidity of pregnancy desires—along with differing cultural norms, stigma, and levels of fatalism—make some groups of women want to let things unfold naturally, or decide not to decide. Empirical research has documented high levels of pregnancy fatalism or lack of planning among some minority populations (Borrero et al. 2015; Jones et al. 2015, 2016; Rocca and Harper 2012; Woodsong et al. 2004). This leads to our third hypothesis:

Hypothesis 3: Young Black women's pregnancy plans are weaker or more fatalistic than their White counterparts' pregnancy plans.

The Dynamics of Pregnancy Desire

Finally, we also consider whether regardless of their prospectively measured preconception desire for pregnancy, Black women are more likely than White women to experience a negative shift in their feelings about pregnancy after they conceive. There are at least two reasons this may be the case: the material conditions in which young Black women experience their pregnancies, and the cultural stigma attached to young Black pregnancies.

First, young Black women—and their partners—have less access to stable highpaying jobs because of discrimination and opportunity denial (Bloome 2014; Pager et al. 2009; Western et al. 2012). Black women also have less access to partners more generally, relative to White women, given the higher rates of mortality and incarceration among Black men relative to White men (Raley et al. 2015; Wilson 2012). They are less likely to be married when they conceive, compared with White women, and their intimate relationships may be more conflictual or partner-dominated than White women's (Broman 2005). Many young women hope to change these circumstances—their own employment, their partner's employment, or the quality of their relationship—before becoming pregnant or between conception and the baby's birth (Edin and Kefalas 2005). If young Black women are less able to improve these circumstances than White women, their feelings may be more likely than White women's feelings to shift negative as they come to grips with these circumstances.

Second, although young Black women have likely experienced racism, they may be unprepared for the intersectional stereotyping—based on their identities as young, Black, and (probably) unmarried—that they experience as a result of their pregnancies (Cole 2009; Rosenthal and Lobel 2016). Negative attitudes toward young Black mothers are fueled by pernicious stereotypes about promiscuity ("Jezebel") and public assistance ("welfare queen") (West 2008; Woodard and Mastin 2005). As a result, they may experience discrimination from their healthcare providers (Shavers et al. 2012), employers (Kennelly 1999), peers (Rosenthal and Lobel 2016), and others.

609

Although retrospective measures of preconception pregnancy desire ask pregnant women or mothers to recall their feelings before they became pregnant, this is a cognitively difficult task if their feelings have changed. People tend to believe that how they feel now is how they have always felt, a phenomenon called "consistency bias" (Schacter 1999).

Thus, based on material conditions, stigma, and consistency bias, we hypothesize the following:

Hypothesis 4: Young pregnant Black women's feelings are more likely than young pregnant White women's feelings to shift in a negative direction between their prospectively measured feelings about a potential pregnancy and their retrospectively measured preconception feelings about their actual pregnancy.

Data and Methods

Study Design

The Relationship Dynamics and Social Life (RDSL) study was based on a simple random sample of the population of young women, ages 18–19, residing in Genesee County, Michigan. The sample of 1,003 young women was drawn from driver's license and personal ID card records. A 60-minute face-to-face baseline survey interview was conducted between March 2008 and July 2009 to assess sociodemographic characteristics, family background, attitudes, and early experiences related to sex and reproductive health. At the conclusion of this baseline interview, respondents were invited to participate in a 2.5-year follow-up study with weekly online or telephone surveys assessing intimate relationships, sex, contraceptive use, pregnancy desire, and pregnancy. Details about survey incentives and response rates are presented elsewhere (Barber et al. 2011, 2016). The follow-up study concluded in January 2012 and yielded 58,594 weekly interviews. Sample characteristics are reported in Table 1.

The RDSL Principal Investigator and research assistants conducted 60- to 90-minute semi-structured interviews with two subsets of RDSL respondents: those who experienced a pregnancy during the study period (n=45), and those with high propensity for pregnancy⁴ but no pregnancy during the study period (n=32).⁵ To ensure breadth, we stratified the sample along two axes: poor versus nonpoor (based on receipt of public assistance) and Black versus non-Black (based on self-reported race). Respondents were paid \$40 for the semi-structured interview.

Two respondents did not consent to be audio recorded, and the recorder malfunctioned for another interview. Two additional interviews did not result in usable data:

⁴ Respondents with high propensity for pregnancy were selected based on a hazard model including the control variables listed in Tables 1 and 5, as well as time-varying pregnancy desire, proportion of the study period with an intimate partner, and proportion of weeks with consistent contraceptive use (used a method every time they had sex). Using the hazard model coefficients, the RDSL team selected the nonpregnant respondents with the highest predicted probability of pregnancy—that is, the nonpregnant respondents who were most similar to those who became pregnant.

⁵ By the time of the interview, four respondents selected for pregnancy interviews were not pregnant, and one respondent for a nonpregnancy interview was pregnant.

			Total San $n=914$ we	*		Black Only n=317	White Only n=597
	Mean	SD	Minimum	Maximum	% Multiply Imputed	Mean	Mean
Pregnancy During Study Period	.22		0	1	0	.24	.18
Demographics							
Black	.35		0	1	0		
Age at baseline	19.19	.57	18.12	20.34	0	19.18	19.20
Highly religious	.58		0	1	0	.83	.44
Childhood Disadvantage							
Mother had a teen birth	.37		0	1	3	.56	.27
Mother's education less than							
high school	.09		0	1	4	.12	.07
Grew up in a non-two-parent							
family	.46		0	1	0	.70	.34
Received public assistance							
during childhood	.36		0	1	0	.53	.27
Current Socioeconomic							
Characteristics							
High school GPA	3.16	.60	0	4.17	6	3.05	3.21
Receiving public assistance	.26		0	1	0	.41	.18
Adolescent Experiences With Sex							
and Reproductive Health							
(index summing the following							
experiences before the RDSL							
study began)	1.84	1.49	0	4	4	2.31	1.60
One or more pregnancies	.25		0	1	<1	.39	.18
Age at first sex 16 years or							
younger	.52		0	1	<1	.62	.47
Two or more sex partners	.60		0	1	3	.70	.54
Ever had sex without birth control	.48		0	1	1	.61	.41

one respondent seemed to be fabricating or dramatically embellishing her stories, and the other was nonparticipatory and distracted. For this article, we omit data from two additional respondents who identified as neither Black nor White. In all, the eligible sample of semi-structured interviews included 38 Black women and 32 White women.

All interviews were transcribed verbatim. Before analyzing the semi-structured data, the research team developed a list of codes to categorize each segment of text in the 2,343 pages of transcribed interviews, using the proximate determinants of pregnancy (sexual behavior, contraceptive use) and characteristics of intimate relationships. We used a hybrid inductive-deductive approach, allowing unforeseen categories to arise (Miles and Huberman 1984). Two trained research assistants applied at least one code to all segments of text, and the research team met frequently to discuss discrepancies and develop intercoder reliability. We used NVivo to attach codes to the textual data to facilitate textual analyses.

Dependent Variable Measures

Prospective Survey Measures of Pregnancy Desire

In each weekly survey when they were not pregnant, young women were asked multiple questions about their prospective pregnancy desire. We use the following two questions:

Desire for pregnancy: How much do you want to get pregnant during the next month? (0=*not at all want* through 5=*really want*)

Desire to avoid pregnancy: How much do you want to avoid getting pregnant during the next month? (0=not at all want to avoid through 5=really want to avoid)

We use these questions to create two dichotomous measures of pregnancy desire. First, because respondents rarely gave nonzero responses to the question about desire for pregnancy, and because any nonzero response similarly and strongly predicts subsequent pregnancy (Miller et al. 2013), we code scores of 1, 2, 3, 4, or 5 (anything but 0) as *any desire for pregnancy*. Second, we code a score of 5 in response to the question about desire to avoid pregnancy as *strongest desire to avoid pregnancy*.

We also create a *categorical combined measure of pregnancy desire* based on previous research using these questions (Miller et al. 2013). First, desire for pregnancy and desire to avoid pregnancy are dichotomized into strong (the top half of the response categories: 3, 4, 5) and weak (the bottom half of the response categories: 0, 1, 2). Next, we combine these two dichotomies into the following four categories: *pronatal*=strong desire for pregnancy+weak desire to avoid pregnancy; *ambivalent*=strong desire for pregnancy+strong desire to avoid pregnancy; *indifferent*=weak desire for pregnancy+weak desire to avoid pregnancy; and *antinatal*=weak desire for pregnancy+strong desire to avoid pregnancy. We further divide *antinatal* into two categories. *Strong antinatal* is the special case in which the desire for pregnancy was the weakest (0) and the desire to avoid pregnancy was the strongest (5). The remainder of the antinatal category is called *moderate antinatal*.

Retrospective Survey Measures of Pregnancy Desire

In each weekly survey, respondents were asked, "Do you think there might be a chance that you are pregnant right now?" Respondents who answered "yes" were asked, "Has a pregnancy test indicated that you are pregnant?" When they reported a pregnancy, women were asked, "Before you found out you were pregnant, did you want to become pregnant at some time in the future?" For those who said no, pregnancies are coded undesired. Those who said yes were asked, "Did you become pregnant at about the right time, earlier than you wanted, or later than you wanted?" For those who responded "at about the right time," pregnancies are coded desired. Those that were "earlier than wanted" are coded undesired. Only three respondents answered "later than wanted" about their pregnancy, which precludes coding them as a separate category; we code them as desired.

		Retrospective Preconception De	e Measure of sire for Pregnancy
		Desired	Undesired
ctive ce of dion e for ancy	Pronatal	same	shifted negative
Prospective Measure of econception Desire for Pregnancy	Ambivalent/Indifferent	same	same
Pre	Antinatal	shifted positive	same

a. Method A	of coding shift i	in pregnancy	desire, ir	ncluding a	mbivalent/
indifferent as		10,		0	

b. Method B of coding shift in pregnancy desire, not including ambivalent/ indifferent as change

ctive ce of tion c for ancy	Pronatal	same	shifted negative
Prospective Measure of conception Desire for Pregnancy	Ambivalent/Indifferent	shifted positive	shifted negative
Pre	Antinatal	shifted positive	same

Fig. 1 Coding of shift between prospective and retrospective measures of preconception pregnancy desire among pregnant women

Survey Measures of Change in Pregnancy Desire

We compare women's retrospective recollection of their preconception pregnancy desire with their prospective categorical combined measure of pregnancy desire. The prospective desire is taken from the week prior to conception, estimated based on the week the pregnancy was reported, the due date (updated during the weekly interviews), the weeks in which she had sex with the father, and/or the birth date. *Change in pregnancy desire* is coded in two ways, as shown in Figure 1. Method A is conservative in regard to change: only switches from antinatal to desired (shifted positive) and from pronatal to undesired (shifted negative) are coded as change. Method B also codes switches from ambivalent/indifferent to desired (shifted positive) and from ambivalent/indifferent to undesired (shifted negative).

Semi-Structured Interview Measures of Pregnancy Desire and Plans

Semi-structured interviews with all women focused on desires and plans for the future, and also focused on current pregnancies among those who were pregnant. Because the interviews also focused on current and prior intimate relationships, past pregnancies were often part of the discussion as well. The exact questions depended on the flow of conversation and the vocabulary used by the respondents.

a i Although desires and intentions are conceptually different, when asked what they *wanted* in terms of childbearing, these conversations about desires often evolved into discussions about specific *plans*.

Independent Variable Measures

Demographics

In the baseline survey, all respondents were asked, "Which of the following groups describe your racial background? Please select one or more groups: American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, Black or African American, or White." Those who chose multiple groups were asked which of the groups "best describes your racial background?" Our measure is coded 1 for Black and 0 for White.⁶ (The 8% of respondents who indicated Latina ethnicity in a preceding question are coded according to their response to the question about race.) Two percent of the respondents reported another race (Asian, Pacific Islander, or Native American) or did not identify a race; they are not included in our analyses. To create *age at baseline* (continuous in exact years), we use the respondent's birthdate from the driver's license and personal ID card records. Respondents who indicated that religion was "very important" or "more important than anything else" are coded *highly religious*.

Childhood Disadvantage

We use four dichotomous indicators of childhood disadvantage: *mother had a teen birth; mother's education was less than high school; respondent grew up in a non-two-parent family* (grew up with only one biological parent or in another arrangement, such as with grandparents or an aunt); and *respondent received public assistance during childhood*.

Current Socioeconomic Characteristics

High school GPA is a continuous variable representing educational attainment up to the time of the baseline interview as well as the potential for future attainment. Respondents were coded as *receiving public assistance* at the time of the baseline interview if they indicated at least one of the following sources: Women, Infants and

⁶ We recognize the inherent limitations in this dichotomous simplification of Black and White women's race. Women's conceptualization of their race can be nuanced, and it varies over time and space (Alba et al. 2016; Saperstein and Penner 2012). We focus on this simplified categorization for parsimony, with the hope that this research will spur additional research on this complex topic. In addition, we focus exclusively on *race* and not *ethnicity* differences, again for parsimony. All respondents who indicated Latina ethnicity also indicated that they were either Black or White, and their small numbers preclude a separate analysis. Removing the Latina women from the analysis does not change the results or our conclusions.

Children program (WIC), Family Independence Program (FIP); temporary assistance to families with children (TANF); cash welfare; or food stamps.

Adolescent Experiences with Sex and Reproductive Health

Four dichotomous variables represent adolescent experiences before the baseline interview: age at first sexual intercourse ≥ 16 , two or more sexual partners, ever had intercourse without using contraception, and had one or more pregnancies. All questions were asked at the baseline interview and referred to the past.

Missing Data

Survey Data

Because the questions about pregnancy desire refer to the upcoming month, only weekly interviews that were completed more than 30 days after the prior interview (4%) result in a gap in the continuous record of pregnancy desire. Women skipped the questions about pregnancy desire very infrequently (<1% of weeks), but they were not asked about their pregnancy desire when they were pregnant or thought they might be pregnant (5% of nonpregnant weeks). In each of these cases, we use the measure of pregnancy desire from the prior interview. Missing data for all other variables is multiply imputed (using *mi* in Stata) with 10 iterations (by default). The percentage of cases multiply imputed is presented in Table 1. Overall, our analytic sample is 53,063 weekly interviews with 914 respondents, 597 White and 317 Black. These women reported 224 pregnancies during the study period, but 10 pregnancies are missing data on retrospective pregnancy desire; those pregnancies are not included in our regression model.

Semi-Structured Interview Data

Six Black respondents and four White respondents did not discuss pregnancy desires or plans. In some cases, the interviews focused on other topics the respondents wanted to discuss (e.g., relationship with the baby's father, baby's father recently getting shot). In others, the interviewer felt that the respondent was discouraging her from asking about future childbearing plans (e.g., respondent was very unhappy about the current pregnancy, the respondent was never pregnant and not in a relationship). In all, we use 32 interviews with Black women and 28 interviews with White women in our analyses.

Analytic Strategy

To test Hypotheses 1 and 2, we compare the week-level and woman-level survey measures of desire for pregnancy and desire to avoid pregnancy for Black and White women.

615

We used *t* tests from unadjusted regression models (logistic for dichotomous variables and ordinary least squares for continuous variables, with clustered standard errors at the week level) to determine whether differences were statistically significant by race. We used the two levels to address different questions: (1) at the week level, whether there were differences in the overall proportion of weeks with any desire for pregnancy and/or less than the strongest desire to avoid pregnancy and the strength of those desires in those weeks; and (2) at the woman level, whether there were differences in the proportion of women who *ever* gave such responses and in the consistency or strength of those desires among those women.

To test Hypothesis 3, we used NVivo to extract all text segments broadly pertaining to pregnancy desires and plans. We read all this text, as well as the text before and after the segments, and reread most of the interviews in their entirety. In addition to discerning desires and plans for childbearing, we specifically looked for responses suggesting that it was impossible or undesirable to make such plans. We also noted whether the plans referred to potential future pregnancies (prospective) or referred to preconception feelings about a current or past pregnancy (retrospective). We distilled each segment down to a short excerpt, lightly edited for readability. We inductively developed several categories to facilitate qualitative comparisons across race: stopping/long delay, child spacing, education/career, material conditions, relationship conditions, age range/other, proception, and not planning. In the text, we describe the qualitative differences, or lack thereof, between the excerpts for Black women and those for White women, within category, separately for prospective and retrospective desires/plans. We provide representative examples in the text and all excerpts in the online appendix.

To test Hypothesis 4, we first present cross-tabulations of prospective and retrospective pregnancy desire, for pregnant women, stratified by race. We estimated two multinomial logistic regression models of change over time in pregnancy desire, which compare the log odds of being in two categories—negative shift and positive shift with the reference category, no change. We report coefficients, which represent the estimated additive effect of the independent variable on the log odds of positive shift versus no change and negative shift versus no change.

Results

Desire for Pregnancy and Desire to Avoid Pregnancy (Hypothesis 1)

Table 2 shows comparisons for the survey measures of pregnancy desires. Overall, pregnancy desire was low; women expressed any desire for pregnancy in only 7% of their weekly interviews. However, more than one-third (37%) of women expressed some nonzero desire for pregnancy during at least one of their weekly interviews. Among this group of women who ever had any pregnancy desire, when they expressed such desire, its strength was moderate; the mean across these women in their nonzero weeks was 2.98. The mean desire across all nonzero weeks was 3.03. The consistency of their desire was low: they expressed nonzero desire in only 22% of their weekly interviews.

The only significant race difference in desire for pregnancy is that a larger proportion of Black women ever had *any* (nonzero) desire for pregnancy than White women

heses) for measures of pregnancy desires (Relationship Dynamics and Social Life data set)	Woman-Level Measures	
le 2 Proportions or means (ranges in parentheses) for measures of pregnancy de	Week-Level Measures	

Week	Week-Level Measures	es			Woman-Level Measures	Isures			
	All Women $(n = 53,063)$	Black Women p for $(n=14,529)$ Diff.	<i>p</i> for Diff.	White Women $(n=38,534)$		All Women $(n=914)$	Black Women p for $(n=317)$ Diff.		White Women $(n=597)$
Desire for Pregnancy Any desire for pregnancy (0, 1) During weeks with nonzero	.07	60 [.]		.06	Desire for Pregnancy Ever had any desire for pregnancy (0,1) Among women who ever had any desire for	.37	.46	* * *	.32
pregnancy desire $(n = 3, 74^{a})$: Strength: Level of desire for pregnancy $(1-5)$	3.03	3.20		2.94	pregnancy: Strength: Mean desire for pregnancy during woman's nonzero desire weeks (1.00–5.00) (0.001/10/2000)	2.98	2.96		3.00
Desire to Avoid Pregnancy					Consistency in topol to a worth a weeks with any desire for pregnancy $(01-1.00)$ $(n=328^{\circ})$ Desire to Avoid Pregnancy	.22	.21		.23
Anything less than the strongest desire to avoid pregnancy (1, 0) During weeks with less than the strongest desire to avoid pregnancy $(n = 4.222^{n})$:	80.	II.		.07	Ever had anything less than the strongest desire to avoid pregnancy $(1,0)$ Among women who ever had anything less than the strongest desire to avoid pregnancy $(n=401^{a})$:	.44	.55	* * *	.39
Strength: Level of desire to avoid pregnancy (0–4)	2.38	2.31		2.42	Strength. Mean desire to avoid pregnancy during weeks with less than the strongest desire to avoid pregnancy (.01–4.00) Consistency: Proportion of weeks with less than the strongest desire to avoid pregnancy(.01–1.00)	1.90	1.92		1.88

We	Week-Level Measures	es			Woman-Level Measures	asures		
	All Women $(n = 53, 063)$	BlackWhiteAll WomenWomen $(n = 53, 063)$ $(n = 14, 529)$ Diff. $(n = 38, 534)$	<i>p</i> for Diff.	White Women $(n=38,534)$		All Women $(n=914)$	AllBlackWhiteWomenWomen p for $(n=914)$ $(n=317)$ Diff.	White Women $(n=597)$
Categorical Combined Measure					Categorical Combined Measure of Pregnancy			
of Pregnancy Desire					Desire			
Strong antinatal	.91	80.		.93	Mean percentage of weeks strong antinatal	80.	.87 *	.91
Moderate antinatal	.032	.031		.032	Mean percentage of weeks moderate antinatal	.038	.044	.035
Indifferent	.0086	.015	***	.0061	Mean percentage of weeks indifferent	.016	.025 *	.011
Ambivalent	.022	.038	**	.016	Mean percentage of weeks ambivalent	.025	.033	.021
Pronatal	.024	.028		.023	Mean percentage of weeks pronatal	.028	.030	.028

Table 2 (continued)

^a Because there are 10 imputations and the sample size varies across imputations, these subsamples do not exactly match 914 women times the fraction of women reported in the line above.

p < .05; p < .01; p < .01; p < .001 (two-tailed t tests).

(46% vs. 32%, respectively). However, the women who ever had any desire for pregnancy did not differ in terms of the strength or consistency of their desire.

Correspondingly, desire to avoid pregnancy was very high at these ages. Women expressed anything less than the strongest possible desire to avoid pregnancy (5, on a 0 to 5 scale) in only 8% of the weekly interviews. However, at the woman level, nearly one-half (44%) had something less than the strongest desire to avoid pregnancy in at least one week during the study. These women had a mean desire to avoid pregnancy of 1.90 in the weeks when they did not respond with a 5, and the mean across all weeks that were not coded 5 is 2.38. Consistency was low, at an average of 22% of weeks.

The only race difference in desire to avoid pregnancy is that more Black than White women ever had something other than the strongest desire to avoid pregnancy (55% vs. 39%). However, those women did not differ in the strength of their desire to avoid pregnancy or in the consistency of their desire to avoid pregnancy.

Ambivalence and Indifference (Hypothesis 2)

Table 2 also shows that women's desire for pregnancy and desire to avoid pregnancy tend to align. Women reported zero desire for pregnancy and the strongest desire to avoid pregnancy (strong antinatal) in the vast majority (91%) of their weekly interviews. Moderate antinatal desire was the next most common combination but occurred in only 3.2% of interviews. Pronatal desire—strong desire for pregnancy and correspondingly weak desire to avoid pregnancy—was reported in 2.4% of interviews. Overall, inconsistent responses to the two questions were quite rare: less than 1% (.86) of weeks for indifference (weak desire for pregnancy and weak desire to avoid pregnancy) and 2.2% for ambivalence (strong desire for pregnancy and strong desire to avoid pregnancy).⁷ The corresponding measures at the woman level, which were computed as the proportion of a woman's total weekly interviews in each category, are similar.

Black and White women exhibit similar patterns. At the week level, they differ in only the two inconsistent categories: Black women more frequently expressed ambivalence (3.8% vs. 1.6%) and indifference (1.5% vs. 0.61%) than White women. Although the two categories were very rare among both Black and White women, these race differences are statistically significant.

At the woman level, the proportions are similar, but there are two differences in statistical significance. First, the race difference in the mean proportion of weeks in the ambivalent category is not significant. The slightly smaller woman-level difference (.009 smaller than the week-level difference, not shown) and the smaller sample size for women relative to weeks render it insignificant (p=.13, not shown). Second, the race difference in the mean proportion of weeks in the strongly antinatal category is significant, although the *p* values are not very different across the two levels (p=.04 for woman level; p=.06 for week level).

⁷ The pregnancy desire questions were introduced as follows, to encourage inconsistent responses: "You know, getting pregnant and having a baby is a big event, one that has a lot of consequences. Most people your age have some positive and some negative feelings about getting pregnant and having a child. For this reason we are going to ask you first how much you want to get pregnant, using a scale from 0 to 5. Then we are going to ask you how much you want to avoid getting pregnant, using a scale from 0 to 5."

Planning (Hypothesis 3)

Black and White women similarly described their plans for future pregnancies. The most common plan, for both groups, was to stop childbearing altogether or to have a long delay. For example, "If I decide to get off (injectable contraception), I'll be getting my tubes tied" (Black woman), or "After I have this baby, I am going to get my tubes tied" (White woman). Another common plan was for a specific age gap between children. For example, "I think I will have about three or four. Not back-to-back, either. I won't do that. I'll wait a couple of years" (Black woman), or "I'm not trying to have them back-to-back, I want space" (White woman).

Others described education or career plans as determinants of the timing of their next pregnancy—for example, "after I get my degree" and "I'd wait until I had already gotten established and had a job" (Black women), and "I'd rather get done with school and everything first," and "I want to start a career, get some stability in my life before I even think about having kids or anything like that" (White women). Closely related, several women had material conditions they wanted before having a(nother) baby. For example, "I don't want to penny pinch. I want to be comfortable. I want to be in a position to get my kids whatever they want" (Black woman), and ". . . right now is not the best time financially to have a kid" (White woman). Relationship conditions were also common, such as "I definitely want to be married first" (Black woman) and "Clearly we don't want to get pregnant yet. We want to wait until (wedding month) before we plan for another kid" (White woman).

A few Black and White women described somewhat less-specific plans—for example, a possible age range, or a time frame—and did not provide a specific rationale. For example, "I'm 23 now, so I'm hoping that by around 25, 26, I'll have one by then" (Black woman), and "I'm just not ready" and "I don't have sex at all without condoms and birth control" (White women).

Only one Black woman and two White women suggested fatalism or lack of planning their future pregnancies. The Black woman said, "I mean, if it happens, it happens, what can you do?" Consistent with other research on reproduction, however, responses did not conform to a binary conceptualization of fatalism (Bell and Hetterly 2014; Jones et al. 2016). That respondent immediately followed her statement by suggesting her own agency: "But I'm not trying to make it happen." The two White women who expressed fatalistic feelings similarly presented a nonbinary picture. One White woman said, "I don't want to put a time on it, because when it's bound to happen . . . When it's your season, it's going to happen. I mean, whenever God has that person for me, and me and the guy get married," and she followed that with, "But nothing right now, nothing in the next couple years." The second White woman said, "But if it were to happen, I would roll with the punches like I did with [child's name]," but also "I don't want more kids right now."

Thus, we find only scant evidence for fatalism or lack of planning for future pregnancies in this sample of young women. And there is no evidence of a race difference in terms of planfulness.

Women's retrospective descriptions of past pregnancies incorporated many of the same themes, but many more of these women described a lack of planning: 6 of the 10 Black women, and 7 of the 13 White women. Black and White women used similar terminology, such as "Whenever it happened," "We weren't trying but we weren't not

trying," "If it's going to happen" (Black women), "I didn't care either way," "There's never a good time for a baby to come," and "Everything happens for a reason" (White women); and they used passive voice to describe what happened, such as "I ended up pregnant" (White woman). Three respondents specifically mentioned God's will as instrumental in their pregnancy. Two Black women said, "God didn't... it wasn't time for me yet," and "He wrote my life," and one White woman described praying to God that she wasn't pregnant. Two of the six Black women were describing *others*' fatalistic views about pregnancy: one woman described her boyfriend's mother as saying "If it's going to happen ...," and another described her own preference: "Even though I was having unprotected sex, I didn't want a baby then."

Overall, we do not find race differences in women's descriptions of their plans for their pregnancies. However, there is a strong difference between women's prospective and retrospective descriptions of planning their pregnancies, with the retrospective accounts of women who actually got pregnant—both Black and White—much more likely to describe a lack of planning.

Dynamic Change Over Time in Pregnancy Desire (Hypothesis 4)

Table 3 shows the cross-tabulation of prospective and retrospective pregnancy desire, separately for pregnant Black and White women, using both methods of coding change (described in the Measures section). Note that in both methods, we combine the ambivalent and indifferent categories because they are so uncommon among the pregnant women.

As panel A shows, although a substantially smaller proportion of pregnant Black women were prospectively pronatal relative to White women (4% vs. 19%; see totals for "Pronatal" rows), similar proportions retrospectively reported their pregnancies as desired at the time of conception (17% and 19%, respectively; see totals for "Desired" columns). In other words, a smaller proportion of Black than White women shifted negative over time. In fact, 77% (3%+74%, shaded areas) of pregnant Black women had stable pregnancy desires, whereas 14% shifted positive and only 9% shifted negative. Among White women, 72% (9%+63%, shaded areas) remained stable, and the pattern was reversed: 10% shifted positive, and a larger percentage (18%) shifted negative.

Multinomial logistic regression models, shown in Table 4, confirm that Black women are significantly less likely than are White women to shift negative after conception, and that Black and White women do not differ in their log odds of shifting positive. Model 1 shows the unadjusted association between race and shifting pregnancy desire, which is not statistically significant (the *p* value for a negative shift is .067). However, Model 2 indicates that once control variables are added to the model, the race difference is significant and substantial, with Black women having 1.26 lower log odds (OR=.28, 72% lower odds) than White women of shifting negative. This is because young women whose mothers did not graduate from high school are particularly unlikely to shift negative and are in fact likely to shift positive, and these women are overrepresented among young Black mothers.

We also reestimated the multinomial logistic regression model using method B

ion and cross-tabulation of prospective and retrospective measures of preconception desire for pregnancy among pregnant women, separate by race	icies, Relationship Dynamics and Social Life data set)	
Table 3 Tabulation and cross-tal	(n=214 pregnancies, Relationsh)	

		× ×	Retrospective Recollection of Preconception Desire	n of Preconception	Desire	
		Black Women	u		White Women	
Prospective Preconception Desire	Desired	Undesired	Total	Desired	Undesired	Total
A. Method A of Coding Change in Pregnancy Desire, Includino Ambivalent/Indifferent as Change						
	3 (3%)	0 (200)	4 (4%)	11 (9%)		23 (19%)
Ambivalent/Indifferent		(0/2)0	10 (11%)		22 (18%)	13 (11%)
Antinatal	13 (14%)	70 (74%)	80 (85%)	12 (10%)	75 (63%)	84 (70%)
Total	16 (17%)	78 (83%)	94 (100%)	23 (19%)	97 (81%)	120 (100%)
B. Method B of Coding Change in Pregnancy Desire, Not Including Ambivalent/Indifferent as Change						
Pronatal		1 (1%)	4 (4%)		12 (10%)	23 (19%)
Ambivalent/Indifferent	6 (6%)		10 (11%)	14 (12%)		13 (11%)
Antinatal	10 (11%)	77 (81%)	80 (85%)	9 (8%)	85 (71%)	84 (70%)
Total	16 (17%)	78 (83%)	94 (100%)	23 (19%)	97 (81%)	120 (100%)
	an prospective an	id retrospective m	easures. White areas ind	icate a positive or ne	egative shift from J	prospective measure

of preconception desire to retrospective measure of preconception desire.

data set)	Model 2
(coefficients, with standard errors in parentheses; $n=214$ pregnancies, Relationship Dynamics and Social Life d	Model 1
	oefficients, with standard errors in parentheses; $n=214$ pregnancies, Relationship Dynamics and Social Life data

	~	Model 1				Model 2	2		
	Negative Shift in Desire vs. No Change	Positive Shift in Desire vs. No Change	t in lo	Negative vs. N	Negative Shift in Desire vs. No Change	esire	Positiv vs.	Positive Shift in Desire vs. No Change	Jesire e
Black Highly Religious Mother Had a Teen Birth Mother's Education Less Than High School Grew up in a Non-Two-Parent Family Received Public Assistance During Childhood Adolescent Experiences With Sex and Reproductive Health (index)	85 (.45)		(.47)	-1.26 .54 .05 35 .28 .58 .58 .58	(.51) (.42) (.42) (.42) (.65) (.47) (.47) (.42) (.17)	* *		$\begin{array}{c} (.61) \\ (.61) \\ (.61) \\ (.65) \\ (.65) \\ (.65) \\ (.51) \\ (.25) \\$	×
Constant Pseudo-R ²	00.1-	.01		-2.04		90.	oc.c-	(1.02)	

p < .05; ***p < .001 (two-tailed tests)

(shown in Figure 1 [panel b] and Table 3 [panel B]), instead considering ambivalent or indifferent women as shifting positive if they retrospectively reported their pregnancies as desired and shifting negative if they retrospectively reported their pregnancies as undesired (rather than coding these two groups as "no change"). Under this scenario, only 1 Black woman (1%) shifted negative, whereas 12 White women (10%) did so.

Discussion

Although our results could be interpreted as consistent with the idea that weathering or instability leads Black women to want pregnancy more than White women at these young ages, the race differences in our analyses are not particularly strong, because the overwhelming majority of both Black and White young women wanted to avoid or delay pregnancy in the near future. Further, Black women were less likely than were White women to retrospectively recall their preconception pregnancy desires as more negative than they were. In other words, we find no evidence for the idea that young pregnant Black women actually wanted to become pregnant more than young pregnant White women, but retrospectively reported those pregnancies as undesired because of the stigma they associated with wanting a pregnancy at a young age (Aiken et al. 2016; Kearney and Levine 2012). On the contrary, perhaps young women who wanted to delay pregnancy retrospectively reported those pregnancies as desired because of the stigma associated with being unable to avoid their pregnancies. However, the RDSL's retrospective survey questions about preconception pregnancy desires were asked while the women were still pregnant. It may be that Black women shift negative about their pregnancies over the long term, but the RDSL questions were asked before they experienced the intersectional stigma and discrimination associated with being a young Black pregnant woman. Future research should further address the dynamics inherent in these feelings.

We find limited evidence that young Black women's prospective feelings about pregnancy are more ambivalent and/or indifferent than White women's, and overall find very low levels of ambivalence and especially indifference. Our approach to ambivalence differs from most other research, which has defined women as ambivalent if they *want* to avoid pregnancy but would accept, welcome, or be happy about a pregnancy anyway, and typically has not defined indifference (Aiken and Potter 2013; Higgins 2017; Yoo et al. 2014). Perhaps our stricter definition of ambivalence—simultaneously wanting and not wanting pregnancy—produced these lower prevalence estimates. Others have argued for more clarity in defining ambivalence and for separating the notions of pregnancy acceptability or happiness from pregnancy planning and desire (Gómez et al. 2019).

In contrast to many others, we do not find race differences in young women's pregnancy plans, and we find low levels of fatalistic beliefs and lack of planning for future pregnancies. Research demonstrating high levels of fatalism has been based on retrospective questions about past pregnancies (Borrero et al. 2015; Hodgson et al. 2013) or general questions that do not refer to specific pregnancies (Jones et al. 2015; Rocca and Harper 2012; Woodsong et al. 2004). Although our semi-structured interviews were cross-sectional—that is, they could not assess change over time—the women who were prospectively describing feelings about a potential pregnancy were much less likely to be fatalistic or not planning their next pregnancy than the women who were retrospectively recalling their preconception feelings about a pregnancy that actually occurred. Consistent with research on infertility (Bell and Hetterly 2014), we speculate that some young women who are currently raising children born from undesired pregnancies use fatalism about past pregnancies as a means of coping with having not gotten what they wanted.

Limitations of the RDSL Sample

The RDSL sample has important limitations. The RDSL had a narrow geographic focus (a single county in Michigan), and the sample was not nationally representative; however, Michigan falls around the national median in measures of cohabitation, marriage, age at first birth, completed family size, nonmarital childbearing, and teenage childbearing (see Ela and Budnick 2017 for a comparison to the National Survey of Family Growth; also see Lesthaeghe and Neidert 2006). More important, the county has a large Black population (about 35%), and the proportion of residents who are Black in the major city within the county is even higher. The United States has 65 cities that are at least 25% Black, representing at least 10 million of the 39 million Black residents in the United States. Thus, the women in the RDSL sample live in areas with similar racial composition as the neighborhoods of many Black people in the United States. On the other hand, the study included only a small number of Latinas, who were classified as either White or Black in our analyses—a limitation that we hope motivates future researchers to implement similar studies on larger and more diverse populations.

Our semi-structured interview respondents represent specific experiences: women who were pregnant in their late teens or early 20s, and women who had a high propensity for pregnancy but avoided it during the study period. Many women in both groups also already had children. Thus, interviews with these two subgroups may not generalize to the views or experiences of all young women. These women may have thought more carefully about their pregnancy desires and plans than women who did not have young births. Given their young births, they may also be the women who were least likely to plan and most likely to have fatalistic feelings about retrospective pregnancies. It is also possible that Black and White women were differentially selected into this group, and racial differences in the population as a whole may be different from those observed in this sample.

Feelings about pregnancy are highly related to women's age, and the age distribution of pregnancies differs by race. Although 24% of the Black women in our sample became pregnant during the study period, compared with 18% of White women, the percentage of pregnancies that Black and White women retrospectively recalled as undesired was similar: 83% and 81%, respectively. This is consistent with other research showing that the Black-White disparity in (retrospective) undesired pregnancy is partially explained by age: younger pregnancies are more likely to be remembered as undesired, and Black women have younger pregnancies, on average (Kim et al. 2016). Thus, there may be larger race differences in pregnancy desire or planning at ages even younger than the RDSL sample. Race disparities

625

are likely to be different at older ages, as well. Future research should continue to examine this important racial disparity, at both younger and older ages.

Conclusion

If undesired births occur among women who cannot or do not want to plan their pregnancies, then imposing a "planning paradigm" on all women could be inappropriate (Aiken et al. 2016). However, the vast majority of young women in our analyses were quite specific and consistent about their future childbearing desires and plans. Although Bachrach and Morgan (2013: abstract) speculated that people "do not necessarily have fertility intentions," but rather "form them only when prompted by specific situations," few Black or White young women had not thought about their future childbearing plans before we talked to them. On the contrary, most of them readily provided specific plans for delaying their next birth or stopping childbearing altogether, and their prospective desires in the weekly surveys were remarkably consistent over time. But we did find a small number of women who did not have specific plans for the future, or who held ambivalent or indifferent short-term desires for pregnancy. Thus, we agree with Aiken and colleagues (2016) that some women may simply not want to plan ahead for pregnancy, or they may want to leave a random element to when they get pregnant. However, the "planning paradigm" appears to be appropriate for the vast majority of young women and does not appear to be differentially applicable to Black and White women.

If perceptions about race differences in the applicability of a planning paradigm persist, these perceptions may bias research, intervention, and clinical practice. Assuming that Black women form internally inconsistent desires related to pregnancy or that they do not want to plan their pregnancies is likely to exacerbate racial disparities in undesired pregnancy by facilitating White women's childbearing desires and plans more than Black women's childbearing desires and plans. Our research challenges these potential implicit biases by explicitly demonstrating that there is little, if any, difference in the applicability of such a paradigm in our sample. Future research should further investigate—in different settings, with different subpopulations, and among women of different ages—whether the concept of pregnancy desire and the related "planning paradigm" are equally appropriate for all women.

Acknowledgments This research was supported by Grants R03 HD077051 and R01 HD078412 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) as well as NICHD grants to the University of Michigan's Population Studies Center (R24 HD041028), Ohio State University's Institute for Population Research (P2C-HD058484), and Bowling Green State University's Center for Family and Demographic Research (R24 HD050959). The data used in this analysis were collected with the support of grants R01 HD050329 and R01 HD050329-S1 from NICHD. The authors gratefully acknowledge Robert Melendez for programming assistance. We are also grateful to the Survey Research Operations (SRO) unit at the Survey Research Center of the Institute for Social Research for their help with the data collection, particularly Vivienne Outlaw, Sharon Parker, and Meg Stephenson. The authors also acknowledge the intellectual contributions of the other members of the original RDSL project team, Heather Gatny, William Axinn, Mick Couper, Steven Heeringa, as well as the Advisory Committee for the project: Larry Bumpass, Elizabeth Cooksey, Kathie Harris, and Linda Waite.

References

- Aiken, A. R. A., Borrero, S., Callegari, L. S., & Dehlendorf, C. (2016). Rethinking the pregnancy planning paradigm: Unintended conceptions or unrepresentative concepts? *Perspectives on Sexual and Reproductive Health*, 48, 147–151. https://doi.org/10.1363/48e10316
- Aiken, A. R. A., & Potter, J. E. (2013). Are Latina women ambivalent about pregnancies they are trying to prevent? Evidence from the Border Contraceptive Access Study. *Perspectives on Sexual and Reproductive Health*, 45, 196–203. https://doi.org/10.1363/4519613
- Alba, R. D., Insolera, N. E., & Lindeman, S. (2016). Is race really so fluid? Revisiting Saperstein and Penner's empirical claims. *American Journal of Sociology*, 122, 247–262.
- Bachrach, C. A., & Morgan, S. P. (2013). A cognitive-social model of fertility intentions. *Population and Development Review*, 39, 459–485.
- Bagozzi, R. P., & van Loo, M. F. (1978). Fertility as consumption: Theories from the behavioral sciences. Journal of Consumer Research, 4, 199–228.
- Barber, J. S., Kusunoki, Y., & Gatny, H. H. (2011). Design and implementation of an online weekly journal to study unintended pregnancies. *Vienna Yearbook of Population Research*, 9, 327–334.
- Barber, J. S., Kusunoki, Y., Gatny, H., & Schulz, P. (2016). Participation in an intensive longitudinal study with weekly web surveys over 2.5 years. *Journal of Medical Internet Research*, 18(6), e105. https:// doi.org/10.2196/jmir.5422
- Bell, A. V., & Hetterly, E. (2014). "There's a higher power, but He gave us a free will": Socioeconomic status and the intersection of agency and fatalism in infertility. Social Science & Medicine, 114, 66–72.
- Bloome, D. (2014). Racial inequality trends and the intergenerational persistence of income and family structure. *American Sociological Review*, 79, 1196–1225.
- Borrero, S., Nikolajski, C., Steinberg, J. R., Freedman, L., Akers, A. Y., Ibrahim, S., & Schwarz, E. B. (2015). "It just happens": A qualitative study exploring low-income women's perspectives on pregnancy intention and planning. *Contraception*, 91, 150–156.
- Broman, C. L. (2005). Marital quality in Black and White marriages. Journal of Family Issues, 26, 431-441.
- Bulatao, R. A., & Lee, R. D. (1983). A framework for the study of fertility determinants. In R. A. Bulatao, R. D. Lee, P. Hollerbach, & J. Bongaarts (Eds.), *Determinants of fertility in developing countries* (Vol. 1, pp. 1–26). New York, NY: Academic Press.
- Burton, L. M. (1990). Teenage childbearing as an alternative life-course strategy in multigeneration Black families. *Human Nature*, 1, 123–143. https://doiorg/10.1007/BF02692149
- Burton, L. M., & Tucker, M. B. (2009). Romantic unions in an era of uncertainty: A post-Moynihan perspective on African American women and marriage. ANNALS of the American Academy of Political and Social Science, 621, 132–148.
- Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (1999). The affect system has parallel and integrative processing components: Form follows function. *Journal of Personality and Social Psychology*, 76, 839–855.
- Chatters, L. M., Taylor, R. J., Bullard, K. M., & Jackson, J. S. (2009). Race and ethnic differences in religious involvement: African Americans, Caribbean Blacks and non-Hispanic Whites. *Ethnic and Racial Studies*, 32, 1143–1163.
- Cole, E. R. (2009). Intersectionality and research in psychology. American Psychologist, 64, 170-180.
- Cutler, A., McNamara, B., Qasba, N., Kennedy, H. P., Lundsberg, L., & Gariepy, A. (2018). "I just don't know": An exploration of women's ambivalence about a new pregnancy. *Women's Health Issues, 28*, 75–81.
- Dash, L. (2003). When children want children: The urban crisis of teenage childbearing. Champaign: University of Illinois Press.
- Edin, K., & Kefalas, M. J. (2005). Promises I can keep: Why poor women put motherhood before marriage (1st ed.). Berkeley: University of California Press.
- Ela, E. J., & Budnick, J. (2017). Non-heterosexuality, relationships, and young women's contraceptive behavior. *Demography*, 54, 887–909.
- Finer, L. B., & Zolna, M. R. (2016). Declines in unintended pregnancy in the United States, 2008–2011. New England Journal of Medicine, 374, 843–852.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.
- Fletcher, J. M., & Wolfe, B. L. (2009). Education and labor market consequences of teenage childbearing evidence using the timing of pregnancy outcomes and community fixed effects. *Journal of Human Resources*, 44, 303–325.

- Foster, D. G., Biggs, M. A., Ralph, L. J., Arons, A., & Brindis, C. D. (2008). Family planning and life planning: Reproductive intentions among individuals seeking reproductive health care. Women's Health Issues, 18, 351–359.
- Friedman, D., Hechter, M., & Kanazawa, S. (1994). A theory of the value of children. *Demography*, 31, 375–401.
- Geronimus, A. T. (1987). On teenage childbearing and neonatal mortality in the United States. *Population and Development Review*, 13, 245–279.
- Geronimus, A. T. (1992). The weathering hypothesis and the health of African-American women and infants: Evidence and speculations. *Ethnicity & Disease*, 2, 207–221.
- Geronimus, A. T. (2003). Damned if you do: Culture, identity, privilege, and teenage childbearing in the United States. Social Science & Medicine, 57, 881–893.
- Geronimus, A. T., Hicken, M., Keene, D., & Bound, J. (2006). "Weathering" and age patterns of allostatic load scores among Blacks and Whites in the United States. *American Journal of Public Health*, 96, 826–833.
- Geronimus, A. T., & Korenman, S. (1992). The socioeconomic consequences of teen childbearing reconsidered. *Quarterly Journal of Economics*, 107, 1187–1214.
- Gómez, A. M., Arteaga, S., Villaseñor, E., Arcara, J., & Freihart, B. (2019). The misclassification of ambivalence in pregnancy intentions: A mixed-methods analysis. *Perspectives on Sexual and Reproductive Health*, 51, 7–15. https://doi.org/10.1363/psrh.12088
- Higgins, J. A. (2017). Pregnancy ambivalence and long-acting reversible contraceptive (LARC) use among young adult women: A qualitative study. *Perspectives on Sexual and Reproductive Health*, 49, 149–156. https://doi.org/10.1363/psrh.12025
- Hodgson, E. J., Collier, C., Hayes, L., Curry, L. A., & Fraenkel, L. (2013). Family planning and contraceptive decision-making by economically disadvantaged, African-American women. *Contraception*, 88, 289–296.
- Hotz, V. J., McElroy, S. W., & Sanders, S. G. (2005). Teenage childbearing and its life cycle consequences exploiting a natural experiment. *Journal of Human Resources*, 40, 683–715.
- Jones, R. K., Frohwirth, L. F., & Blades, N. M. (2016). "If I know I am on the pill and I get pregnant, it's an act of God": Women's views on fatalism, agency and pregnancy. *Contraception*, 93, 551–555.
- Jones, R. K., Tapales, A., Lindberg, L. D., & Frost, J. (2015). Using longitudinal data to understand changes in consistent contraceptive use. *Perspectives on Sexual and Reproductive Health*, 47, 131–139. https://doi .org/10.1363/47e4615
- Kane, J. B., Morgan, S. P., Harris, K. M., & Guilkey, D. K. (2013). The educational consequences of teen childbearing. *Demography*, 50, 2129–2150.
- Kearney, M. S., & Levine, P. B. (2012). Why is the teen birth rate in the United States so high and why does it matter? *Journal of Economic Perspectives*, 26(2), 141–166.
- Kemet, S., Lundsberg, L. S., & Gariepy, A. M. (2018). Race and ethnicity may not be associated with risk of unintended pregnancy. *Contraception*, 97, 313–318.
- Kennelly, I. (1999). "That single mother element": How White employers typify Black women. Gender & Society, 13, 168–192.
- Kim, T. Y., Dagher, R. K., & Chen, J. (2016). Racial/ethnic differences in unintended pregnancy: Evidence from a national sample of U.S. women. *American Journal of Preventive Medicine*, 50, 427–435.
- Klerman, L. V. (2000). The intendedness of pregnancy: A concept in transition. Maternal and Child Health Journal, 4, 155–162.
- Kost, K., & Lindberg, L. (2015). Pregnancy intentions, maternal behaviors, and infant health: Investigating relationships with new measures and propensity score analysis. *Demography*, 52, 83–111.
- Kost, K., Maddow-Zimet, I., & Kochhar, S. (2018). Pregnancy desires and pregnancies at the state level: Estimates for 2014 (Report). New York, NY: Guttmacher Institute. Retrieved from https://www .guttmacher.org/report/pregnancy-desires-and-pregnancies-state-level-estimates-2014
- Kost, K., & Zolna, M. (2019). Challenging unintended pregnancy as an indicator of reproductive autonomy: A response. *Contraception*, 100, 5–9. https://doi.org.10.1016/j.contraception.2019.04.010
- Kreyenfeld, M. (2010). Uncertainties in female employment careers and the postponement of parenthood in Germany. *European Sociological Review*, 26, 351–366.
- Lee, D. (2010). The early socioeconomic effects of teenage childbearing: A propensity score matching approach. *Demographic Research*, 23, 697–736. https://doi.org/10.4054/DemRes.2010.23.25
- Lesthaeghe, R. J., & Neidert, L. (2006). The second demographic transition in the United States: Exception or textbook example? *Population and Development Review*, 32, 669–698.

- Levine, J. A. (2013). *Ain't no trust: How bosses, boyfriends, and bureaucrats fail low-income mothers and why it matters.* Berkeley: University of California Press.
- Lichter, D. T., Parisi, D., & Taquino, M. C. (2012). The geography of exclusion: Race, segregation, and concentrated poverty. *Social Problems*, 59, 364–388.
- Lincoln, C. E., & Mamiya, L. H. (1990). The Black church in the African American experience (1st ed.). Durham, NC: Duke University Press.
- Miles, M. B., & Huberman, A. M. (1984). Qualitative data analysis: A sourcebook of new methods. Thousand Oaks, CA: Sage.
- Miller, W. B. (1994). Childbearing motivations, desires, and intentions: A theoretical framework. Genetic, Social & General Psychology Monographs, 120, 225–258.
- Miller, W. B., Barber, J. S., & Gatny, H. H. (2013). The effects of ambivalent fertility desires on pregnancy risk in young women in the USA. *Population Studies*, 67, 25–38.
- Mollborn, S. (2017). Mixed messages: Norms and social control around teen sex and pregnancy. New York, NY: Oxford University Press.
- Moos, M.-K., Petersen, R., Meadows, K., Melvin, C. L., & Spitz, A. M. (1997). Pregnant women's perspectives on intendedness of pregnancy. *Women's Health Issues*, 7, 385–392.
- Moreau, C., Hall, K. S., Trussell, J., & Barber, J. S. (2012). Effect of prospectively measured pregnancy intentions on the consistency of contraceptive use among young women in Michigan. *Human Reproduction*, 28, 642–650.
- Pager, D., Bonikowski, B., & Western, B. (2009). Discrimination in a low-wage labor market: A field experiment. American Sociological Review, 74, 777–799.
- Potter, J. E., Stevenson, A. J., Coleman-Minahan, K., Hopkins, K., White, K., Baum, S. E., & Grossman, D. (2019). Challenging unintended pregnancy as an indicator of reproductive autonomy. *Contraception*, 100, 1–4. https://doi.org/10.1016/j.contraception.2019.02.005
- Rackin, H., & Morgan, S. P. (2018). Prospective versus retrospective measurement of unwanted fertility: Strengths, weaknesses, and inconsistencies assessed for a cohort of US women. *Demographic Research*, 39, 61–94. https://doi.org/10.4054/DemRes.2018.39.3
- Raley, R. K., Sweeney, M. M., & Wondra, D. (2015). The growing racial and ethnic divide in U.S. marriage patterns. *Future of Children*, 25(2), 89–109.
- Rocca, C. H., & Harper, C. C. (2012). Do racial and ethnic differences in contraceptive attitudes and knowledge explain disparities in method use? *Perspectives on Sexual and Reproductive Health*, 44, 150–158. https://doi.org/10.1363/4415012
- Rosenthal, L., & Lobel, M. (2016). Stereotypes of Black American women related to sexuality and motherhood. *Psychology of Women Quarterly*, 40, 414–427.
- Santelli, J. S., Lindberg, L. D., Orr, M. G., Finer, L. B., & Speizer, I. (2009). Toward a multidimensional measure of pregnancy intentions: Evidence from the United States. *Studies in Family Planning*, 40, 87–100.
- Santelli, J. S., Rochat, R., Hatfield-Timajchy, K., Gilbert, B. C., Curtis, K., Cabral, R., . . . Unintended Pregnancy Working Group. (2003). The measurement and meaning of unintended pregnancy. *Perspectives* on Sexual and Reproductive Health, 35, 94–101. https://doi.org/10.1363/3509403
- Saperstein, A., & Penner, A. M. (2012). Racial fluidity and inequality in the United States. American Journal of Sociology, 118, 676–727.
- Schacter, D. L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychologist*, 54, 182–203.
- Schoendorf, K. C., Hogue, C. J. R., Kleinman, J. C., & Rowley, D. (1992). Mortality among infants of Black as compared with White college-educated parents. *New England Journal of Medicine*, 326, 1522–1526.
- Sennott, C., & Yeatman, S. (2018). Conceptualizing childbearing ambivalence: A social and dynamic perspective. *Journal of Marriage and Family*, 80, 888–901.
- Shavers, V. L., Fagan, P., Jones, D., Klein, W. M. P., Boyington, J., Moten, C., & Rorie, E. (2012). The state of research on racial/ethnic discrimination in the receipt of health care. *American Journal of Public Health*, 102, 953–966.
- Sobotka, T., Skirbekk, V., & Philipov, D. (2011). Economic recession and fertility in the developed world. Population and Development Review, 37, 267–306.
- Stanley, D. J., & Meyer, J. P. (2009). Two-dimensional affective space: A new approach to orienting the axes. *Emotion*, 9, 214–237.

- Steensland, B., Robinson, L. D., Wilcox, W. B., Park, J. Z., Regnerus, M. D., & Woodberry, R. D. (2000). The measure of American religion: Toward improving the state of the art. *Social Forces*, 79, 291–318.
- Stones, R. E., Stulberg, D. B., & Bello Kottenstette, J. K. (2017). Patient experiences with pregnancy planning and perspectives on reproductive care in community health centers: A qualitative study of African American women in Chicago. *Women's Health Issues*, 27, 322–328.
- Townes, B. D., Beach, L. R., Campbell, F. L., & Martin, D. C. (1977). Birth planning values and decisions: The prediction of fertility. *Journal of Applied Social Psychology*, 7, 73–88.
- West, C. M. (2008). Mammy, Jezebel, Sapphire, and their homegirls: Developing an "oppositional gaze" toward the images of Black women. In J. Chrisler, C. Golden, & P. Rozee (Eds.), *Lectures on the psychology of women* (Vol. 32, pp. 286–299). New York, NY: McGraw Hill.
- Western, B., Bloome, D., Sosnaud, B., & Tach, L. (2012). Economic security and social stratification. *Annual Review of Sociology*, 38, 341–359.
- Wilson, W. J. (2012). The truly disadvantaged: The inner city, the underclass, and public policy (2nd ed.). Chicago, IL: University of Chicago Press.
- Woodard, J. B., & Mastin, T. (2005). Black womanhood: "Essence" and its treatment of stereotypical images of Black women. *Journal of Black Studies*, 36, 264–281.
- Woodsong, C., Shedlin, M., & Koo, H. (2004). The "natural" body, God and contraceptive use in the southeastern United States. *Culture, Health & Sexuality, 6*, 61–78.
- Yoo, S. H., Guzzo, K. B., & Hayford, S. R. (2014). Understanding the complexity of ambivalence toward pregnancy: Does it predict inconsistent use of contraception? *Biodemography and Social Biology*, 60, 49–66.

Jennifer S. Barber (corresponding author) jenbarb@iu.edu

Barber • Department of Sociology and Kinsey Institute, Indiana University, Bloomington, IN, USA

Guzzo • Department of Sociology, Bowling Green State University, Bowling Green, OH, USA

Budnick • Population Studies Center and Center for Sexuality and Health Disparities, University of Michigan, Ann Arbor, MI, USA

Kusunoki • Department of Systems, Populations, and Leadership, School of Nursing, University of Michigan, Ann Arbor, MI, USA

Hayford . Department of Sociology, The Ohio State University, Columbus, OH, USA

Miller • Transnational Family Research Institute, Aptos, CA, USA