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CHILDBEARING IN THE SHADOW OF THE GREAT RECESSION: THE FORMATION, REALIZATION, AND REVISION OF FERTILITY GOALS IN THE U.S.

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Abstract

Since the Great Recession, births in the U.S. have steadily declined, raising concerns about population decline and future labor market crises. Declining period birth rates could result from delayed fertility, declines in intended parity, or declining ability to translate intentions into births. Understanding the role of each of these possibilities requires longitudinal data with information on fertility goals, fertility behaviors, and socioeconomic characteristics. Using Waves IV (2008, ages 26-31) and V (2016-2018, ages 35-40) of the National Longitudinal Survey of Adolescent to Adult Health to examine fertility intentions at Wave IV, births between waves, and fertility intentions at Wave V reveals important insights. One, both objective and subjective economic conditions are linked to lower intentions to have a child at Wave IV. Two, the likelihood of having a child and of realizing one's exact intended parity by Wave V are lower among those with less education, lower incomes, lower perceived social class rank, and those who do not own a home. Three, many with unrealized fertility intentions do not plan to have a child in their remaining childbearing years, especially among those with less than a college degree. Economic factors affect every part of the fertility decision-making and behavioral process.

Low fertility rates have long been a concern among industrialized countries, but the U.S. has had relatively high fertility, with the Total Fertility Rate (TFR) hovering around 2.0 from the late 1980s through the mid-2000s (Martin et al. 2018). But since 2007, fertility rates have declined, reaching a low of 1.7 in 2018, a level not seen since the 1970s (Hamilton et al. 2020). The ongoing downward trend has received extensive media coverage, with some viewing these below-replacement levels as a sign of population decline or an impending economic crisis (e.g.,(Carroll and Charles 2019; Cha 2017, 2018; Keshner 2019). Despite both scholarly and media attention, the individual-level processes underlying the recent declines – whether and how individuals are altering their short- and long-term childbearing decisions, and their ability to carry out their decisions – remain unclear.

An identifiable fact, though, is that the recent fertility decline coincides with the Great Recession (2007-2009). In general, when the economy is in a downturn, fertility falls, but the lower rates tend to be a short-term phenomenon, indicative of a postponement of births to be recouped when the economy has recovered (Cherlin et al. 2013; Örsal and Goldstein 2018; Sobotka, Skirbekk, and Philipov 2011). This has not been the case in the post-Recession years, as births have continued to decline even as both individual intended parity and overall ideal family size largely remain stable (Allred and Guzzo, 2018; Daugherty and Martinez 2016; Saez 2018). This begs the question, what is different about the post-Recession recovery? A key issue may be its impacts on those in the prime childbearing years, particularly the late 20s and early 30s. The Great Recession occurred during a period in which the transition to adulthood was already becoming longer and more difficult (Settersten and Ray 2010). In fact, the Recession and recovery heightened economic pressures even as the social safety net was weakening (Cooper 2014; Seltzer, 2019; Silva 2013), further lengthening the time it takes to achieve key markers of

adulthood – completing schooling, securing full-time employment, forming a stable union – and become economically secure (Vespa 2017). And although the economy writ large has indeed improved by some indicators (Center for Budget and Policy Priorities 2021), the recovery was decidedly uneven, with younger groups particularly disadvantaged compared to earlier cohorts at the same age. For instance, in 2009-2013, 18-34 year olds were more educated than prior cohorts but had considerably lower incomes than 18-34 year olds in 1980, 1990, or 2000 (Vespa 2015).

In the U.S., research on fertility, the Great Recession, and economic conditions more generally has examined the link between aggregate economic indicators and aggregate fertility rates (e.g., (Cherlin et al. 2013; Schneider 2015), aggregate economic indicators and individual fertility behaviors (e.g., Schneider 2017; Schneider and Gemmill 2016; Schneider and Hastings 2015; Seltzer, 2019), and individual financial circumstances and individual fertility behaviors (e.g., (Brauner-Otto and Geist 2018; Min and Taylor 2018; Nau, Dwyer, and Hodson 2015). Although this body of work has amply demonstrated that poor economic conditions are associated with lower fertility, none examined how such conditions affect the formation and realization of fertility goals. At the most basic level, low fertility rates in recent years are driven by individuals deciding to have fewer children *or* individuals having greater difficulty in translating intentions into behavior. These possibilities are not mutually exclusive, and both are important for understanding long-term fertility trends. If young adults are largely just postponing births – they have not yet had all the children they intend but will in the future – then it is possible that current low fertility rates reflect a shift in the timing of childbearing, and fertility rates will rise in the future. Alternatively, though, if individuals are intending to have fewer children (Hartnett and Gemmill 2020) or if they are unable to have as many children as they intend, then fertility rates will likely remain low. The ability to forecast future fertility depends

on identifying the influences on (1) forming fertility intentions for the future (2) the likelihood of realizing fertility intentions over time, and (3) the likelihood of revising fertility goals towards the end of the childbearing years.

Thus, studying the formation, realization, and revision of fertility goals among individuals who experienced much of their childbearing during the Great Recession and its recovery can provide key insights into the drivers of recent U.S. fertility declines and, potentially, identify levers for policy intervention. Unfortunately, there are few longitudinal U.S. datasets with information about a) young adults' intended *and* actual fertility and b) a wide set of socioeconomic, life course, and psychosocial characteristics. The National Longitudinal Study of Adolescent to Adult Health (Add Health), however, is uniquely suited for such research. Wave IV (2008) coincided with the Great Recession, and respondents were aged 26-31, with much of their prime childbearing years ahead of them but at a life course stage in which fertility preferences solidify and become more certain (Ni Bhrolcháin and Beaujouan 2019). Wave V (2016-2018) captures respondents nearly a decade later, as they approach the end of their childbearing years (ages 35-40). Taking advantage of Add Health's rich set of socioeconomic, relationship, psychosocial, and demographic measures and its unique fertility indicators, this research asks fairly straightforward, but crucial, questions: What factors are associated with the fertility intentions of men and women in their late 20s and early 30s? As time passes, which factors predict childbearing and the realization of fertility goals? And, as individuals approach the end of their childbearing years, which factors are linked to the revision of fertility goals?

Theoretical Framing

This research draws upon several theoretical approaches, including the Theory of Planned Behavior (TPB), the Theory of Conjunctural Action (TCA), and the life course perspective. The

TPB (Ajzen 1985; Ajzen and Klobas 2013) is a widely used model in demographic studies of fertility behavior (e.g., Dommermuth, Klobas, and Lappegård 2011; Dommermuth, Klobas, and Lappegard 2015; Mencarini, Vignoli, and Gottard 2015). At the most basic level, the TPB assumes that a behavior is preceded by an intention, and, "barring unforeseen events, people are expected to act in accordance with their intentions" (Ajzen 1985, p. 12). In the TPB, achieving a goal – in this case, having a certain number of children – is the result of reasoned action, wherein people articulate an intention and pursue steps to achieve it. These intentions, in turn, are contingent upon on three concepts: (1) behavioral attitudes (perceived costs and benefits of childbearing), (2) social norms (perceived childbearing expectations and beliefs of family, friends, and peers), and (3) sense of control (perceived ability to manage whether reproductive behavior) (Ajzen and Klobas 2013). Background factors influence the formation of attitudes, norms, and perceived control.

Intended parity is a key measure of fertility intentions, but its predictive power is modest. In fact, prospective fertility intentions at younger ages often do not match actual fertility later, with variation across education, career, and union formation experiences (Morgan and Rackin 2010; Musick et al. 2009; Rackin and Bachrach 2016). Over the long term, men and women are more likely to *not* reach their exact intended family size than to do so (Berrington and Pattaro 2014; Morgan and Rackin 2010; Quesnel-Vallée and Morgan 2003). This begs the question: why do intentions not always translate into behavior? The TCA might provide some insight (Bachrach and Morgan 2013; Johnson-Hanks et al. 2011; Morgan and Bachrach 2011). Central to the TCA is the idea that individuals possess "schemas" – ideas, values, beliefs, scripts, and patterns of thinking – that they draw upon to guide and inform intention and behavior. In the U.S., an increasingly prominent schema is that childrearing requires major economic, emotional,

and social investments – and that the resources parents have to devote to children are directly related to children's development and success (see, e.g., Blair-Loy 2009; Bock 2000; Calarco 2018; Hays 1998; Lareau 2011; Myers 2017). According to this "resource-intensive parenting" schema, childbearing should be delayed until people have the necessary financial, emotional, and relationship stability. A related schema is that early fertility derails educational and occupational achievement, insofar as the parent role is incompatible with the student role and more time-intensive career pursuits (Mills et al. 2011). Thus, intending but postponing parenthood (or additional births) until reaching certain statuses, such as one's desired educational level or being stably married, and until achieving economic security is common.

Both the TPB and the TCA are implicitly informed by the life course perspective, but more explicit attention to its key tenets can help explain why the Great Recession might be particularly relevant for the fertility of recent cohorts. The life course perspective, first introduced by Elder (1975) but expanded and adapted extensively (see Alwin (2012) for a review), emphasizes several relevant concepts. First, the prominence of historical time in shaping multiple aspects of individuals' lives is central. The Great Recession has been widely studied, with effects noted not just on economic characteristics such as income and employment but also health (Burgard and Kalousova 2015), child maltreatment (Schneider, Waldfogel, and Brooks-Gunn 2017), and living arrangements (Fry and Passel 2014). Not surprisingly, union formation and stability (Cohen 2014; Schneider and Hastings 2015) and fertility (Cherlin et al. 2013; Percheski and Kimbro 2017; Su 2019) were also affected by the Great Recession. The Great Recession also ushered in new level also ushered in new levels of political polarization which have continued to widen (Brooks and Manza 2013; Dimock 2020).

Second, the life course perspective emphasizes the importance of age and life course stage in conjunction with historical time. Here, the pertinent issue is that the timing or age at which individuals experience an event affects the way that event will play out in their lives. In general, the Recession led many to experience material hardships, such as difficulty paying bills or having enough food to eat. But for men and women in their late 20s and early 30s during the Recession, their prime childbearing years – and their prime career-building years – were disrupted, and so the Recession potentially has a long-term, and permanent, impact. Consider home ownership, for example – the primary wealth asset of most Americans and considered a marker of middle-class status. By 2017, home ownership rates for those 35-44 (roughly the Wave V cohort) were 10 percentage points lower than that same age group had in 2006 (Moore 2018), whereas rates had recovered for older age groups. If fertility intentions are relatively concrete by the late 20s and early 30s (Ni Bhrolcháin and Beaujouan 2019) – less reflective of general social norms and more specific to individuals' goals and preferences – but the circumstances conducive to realizing those intentions are unfavorable, then unrealized fertility intentions will be common.

Third, the life course perspective focuses on statuses (i.e., parent, spouse, graduate, employee) and the timing and sequencing of transitions to those statuses. Key transitions on the pathway to adulthood include finishing school, obtaining secure employment, becoming financially stable, forming unions, and having children. These transitions are happening later in life, and increasingly fewer men and women follow a 'standard' life course path in which individuals finish school, get a job, marry (and stay married), and have children, in that order (Furstenberg 2010; Thomson, Winkler-Dworak, and Kennedy 2013). Compared to earlier cohorts at the same age, this cohort likely feels as if it is not doing well, as if they are behind.

Such perceptions – that they are not where they should be – likely color their optimism about, and likelihood of, having children. In essence, the Add Health cohort experienced a confluence of economic and social pressures at a key life course stage which could have long-term implications for whether, when, and how they form, realize, and adjust prospective fertility intentions.

Thus, extending the TPB to incorporate the TCA's notion of schemas and explicitly applying a life course perspective, the Add Health cohort experienced their prime childbearing and career-building stages during the Great Recession and recovery. They likely took longer to fully and stably transition to adulthood and achieve the normative prerequisites for becoming a parent, if they reached them at all. As a result, at younger ages, they likely intended to have most of their children in the future, but as they approach the end of their childbearing years, many men and women may not have been able to have all the children they originally intended. I argue that at least some of what Ajzen might have considered "unforeseen events" are, in fact, measurable and knowable – do individuals feel as if they have achieved the adult statuses and economic security viewed as necessary preconditions for childbearing?

As they approach the end of their childbearing years in the late 30s and early 40s, individuals may take stock of their fertility goals and their current life circumstances. Despite rising birth rates for women 35 and older, birth rates in the late 30s and especially the late 40s are lower than younger age groups (Hamilton et al., 2019), suggesting that the ability to recoup postponed births in these ages is limited. On the one hand, we might expect that many will have simply downgraded their earlier fertility intentions if they did not have the number of children they intended when they were younger (Gemmill 2019; Hayford 2009; Rybińska and Morgan 2019). On the other hand, some individuals may continue to intend to have children or perhaps

remain uncertain; in the latter scenario, men and women may unwilling to abandon their earlier plans entirely even if they do not think it is likely they can fulfill them. More advantaged men and women, especially, may continue to intend births at older ages or, at least, have not yet decided they do not intend any (more) children. Individuals with greater economic security may have social networks in which delayed childbearing is common and may also have more resources in which to access reproductive services to aid in childbearing at later ages.

Current Research

In sum, individuals with higher objective and subjective perceived social, economic, and relational certainty are both more likely to intend to have children in the future (throughout the life course) and have a greater chance of realizing those intentions. Drawing upon the theoretical frameworks discussed above, there are three hypotheses:

Hypothesis 1: In the late 20s and early 30s, men and women further along the transition to adulthood (completed education, stable relationship, financial security) and with greater perceptions of economic security are more likely to intend to have children in the future compared to their less advantaged peers.

Hypothesis 2: Compared to their less advantaged peers, individuals who are farther along the transition to adulthood and with greater perceptions of economic security in their late 20s and early 30s are **a**) more likely have had any births by Wave V, conditional on intending a birth and **b**) more likely to have achieved their exact number of intended children than to have over- or under-achieved by Wave V.

Hypothesis 3: In the late 30s and early 40s, adults with better socioeconomic circumstances are more likely to intend a birth or be uncertain than to intend no birth compared to their less advantaged peers.

Certainly, parity plays a role in whether individuals intend to have children in the future and whether they realize those intentions – individuals who are childless at younger ages usually intend to have children in the future (Gemmill 2019; Hayford 2009; Rybińska and Morgan 2019), but, at any given point, they are also less likely to realize their intentions relative to those who begin childbearing earlier in the life course (Dommermuth et al. 2015; Hagewen and Morgan 2005). Thus, analyses consider both the overall link between Wave IV intentions and fertility by Wave V, conditional on parity, and specifically the link among those who are childless at Wave IV.

Other factors are linked to fertility intentions and behaviors as well, with relationship status being particularly relevant (Régnier-Loilier, Vignoli, and Dutreuilh 2011) in addition to sociodemographic characteristics such as age, gender, race/ethnicity, and nativity (Guzzo, Hayford, and Lang 2019; Rybińska and Morgan 2019). Further, psychosocial characteristics that reflect individuals' more general family orientations, such as religiosity or political orientation, are potentially relevant. Religiosity and political conservatism are linked to higher fertility, whereas those who are more liberal tend to have fewer children (Bein, Gauthier, and Mynarska 2021; Hayford and Morgan 2008; Lakomý 2017; Lesthaeghe and Neidert 2006, 2009). Finally, health factors may be important – along with indicators of perceived fecundity and behaviors (Gemmill, Sedlander, and Bornstein 2021; Polis and Zabin 2012), self-rated health not only taps into physical and mental health but also feelings of energy and vitality (Au and Johnston 2014).

Data and Methods

Data come from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative longitudinal survey of adolescent boys and girls in grades 7-12 in the 1994-95 school year. The original sampling frame included 80 high schools and their feeder

middle schools, stratified by region, urbanicity, sector, race, and size. From school rosters, adolescents were selected to complete in-home interviews at Wave I (1995); some of these were oversamples of key groups (certain minority groups, sibling pairs, disabled youth, and adopted youth). Youth still in school one year later (grades 8-12) were re-interviewed at Wave II (1996). The original Wave I respondents were re-interviewed three more times: 2001-02, ages 18-24; 2008, ages 26-31; 2016-18, 35-40.[1] The key life course, economic insecurity, and fertility measures are drawn from Waves IV and V, with background and fixed sociodemographic characteristics drawn from Wave I. There are 12,300 respondents in Wave V of Add Health, of whom 10,914 were interviewed at Wave IV. Of those, 229 were part of the oversamples, without sample weights, and were excluded from the analyses, reducing the possible sample size to 10,685. Creating indicators of fertility behaviors across waves led to additional reductions in the analytical sample, discussed below.

Fertility Measures

At both Waves IV and V, fertility is measured by total number of children, increased by 1 for those pregnant the time of interview. At Wave IV, total intended parity comes from the question "Including any children you may already have, how many children, in total, do you intend to have?", with responses ranging from 0-10. Comparing information on current parity with total intended parity permits the creation of a dichotomous measure of whether respondents *intend to have any children* (to test Hypothesis 1). However, 98 respondents were dropped because they reported at Wave IV that they intended to have fewer children than their Wave IV parity.

Comparing information on Wave IV parity and Wave V parity permits creation of a dichotomous measure of whether respondents *had any children between waves* (to test

[1] At Wave IV, the full age range is 24-34, but 93% of the sample was between 26-31. At Wave V, the full age range is 33-44, but 91% of the sample was 35-40.

Hypothesis 2a) and comparing information on Wave IV total intended parity with actual parity at Wave V permits creation of a three-category variable indicating *fertility goal achievement* by Wave V (to test Hypothesis 2b): fewer children than intended, exactly as many children as intended, more children than intended. Unfortunately, data inconsistencies within Wave V and across waves led to the loss of several hundred cases. Wave V collected parity information in two different sections of the survey: a section on sexual experiences and a section on births, children, and parenting. Forty-five respondents did not have provide valid answers in either section, and 635 respondents provided inconsistent responses across the two sections; together, this results in a loss of 680 respondents. Then, comparing across waves led to another round of dropped cases: 224 respondents reported more children at Wave IV than at Wave V, and 727 reported inconsistent dates of birth across waves (either the first birth dates did not match or there was a birth reported at Wave V that preceded, but was not reported in, the Wave IV survey). In total, fertility reporting discrepancies led to a loss of 1,729 cases, for a final sample size for most analyses of 8,956 cases. On average, compared to the analytical sample, excluded respondents – those with inconsistent fertility data – were more economically disadvantaged (i.e., lower income, less education, less likely to have a job that is part of their career goals, lower self-reported social class), differed on psychosocial characteristics (i.e., poorer health, more religious), and were less often female and non-Hispanic White. There is also some indication that the excluded respondents had more children; although parity or dates of births did not match across or within waves, these respondents reported more children at a given wave than the respondents whose fertility reporting was consistent. The implications of these differences are discussed in the limitations section.

The last fertility measure indicates future fertility intentions at Wave V; there is no indicator of total intended parity at Wave V. Unfortunately, future fertility intentions are only asked of currently married, cohabiting, or dating/sexually active adults (80.9% of the analytical subsample). The analytical sample for analyses of this measure is 7,248. These respondents were asked "How would you describe your current plans for having a child with your partner?" Responses include (a) "I do not want a baby in the future," (b) "I am not sure if I want a baby in the future," (c) "I do not want a baby now, but would like to in the future with my current partner," (d) "I do not want a baby with my current partner, but might want one in a future relationship or without a partner," (e) "I am actively trying to get pregnant or get my current partner pregnant," and (f) "I am pregnant or my current partner is pregnant." These are collapsed into three categories to indicate *prospective fertility desires*[2] (to test Hypothesis 3): does not intend (response a), not sure (responses b, d), and intends (responses c, e, f).

Independent Variables

There are two groups of socioeconomic status variables: objective and subjective. Objective characteristics measured similarly at both Waves IV and V include educational attainment and household income (though there are additional categories of income at the highest levels at Wave V). Debt was measured slightly differently across waves; at Wave IV, this includes all non-mortgage debt, but at Wave V, there are separate indicators of educational debt and other forms of non-mortgage debt. Income and debt are categorical ordered variables but are treated as linear in the models; alternate specifications yielded substantively similar results. Home ownership is derived from a direct question at Wave IV and from an affirmative response to an item on

[2] Intentions and desires are interrelated but distinct concepts. Theoretically, desires precede intentions, with desires less concrete whereas intentions involve, to some extent, a commitment to act. Individuals evaluate desires in light of perceived situational constraints and convert them (or not) into intentions (Miller 1992, 1995; Miller and Pasta 1994).

mortgage debt at Wave V. There is also a dichotomous indicator of material hardship. At Wave IV, material hardship indicates an affirmative response for at least one of five experiences in the last year: had phone cut off due to non-payment; did not pay full rent/mortgage; was evicted; did not pay full utility bill; or, worried about running out of food. At Wave V, there are only two items upon which to base this measure, both of which refer to a considerably longer time frame: falling behind on bills since 2008 or experiencing foreclosure proceedings, eviction, or repossession since 2008.

There are three subjective measures, though two are asked only at Wave IV. First, there is a measure of educational attainment relative to aspirations at Wave IV based on the question: "Which of the following best describes your desired level of education?" with responses of "I have achieved my desired level of education," "I have not achieved my desired level of education but believe I will," and "I have not achieved my desired level of education and do not believe that I will." Second, there is a categorical measure of employment relative to career goals. Respondents were asked, in reference to their current or most recent job, whether their job was part of their career goals.[3] This is used to create a four-category measure: current/most recent job was part of career goals, current/most recent job was in preparation for career goals, current/most recent job was not part of career goals, and a residual category of those who reported never having career goals or never having a job. Finally, at both Waves IV and V, respondents were presented with a social class ladder diagram in which 10 represented the most money, education, and job respectability and 1 represented the lowest, and they were asked to pick which 'rung' they felt best represented their current position.

[3] Employment itself is not included in the models, given its endogeneity with fertility among women.

Psychosocial and health characteristics measured at both waves include: religiosity, measured as a four-point scale of importance in daily life from not at all important to more important than anything else; political orientation, measured as a five-point scale of very conservative to very liberal; and self-rated health, measured on a five-point scale of poor to excellent. These measures are entered as linear variables in models. An additional measure of health, specific to fertility, is also included for each wave: a dichotomous indicator of a history of trouble getting pregnant/impregnating someone or experiencing miscarriages. Demographic characteristics include gender, race-ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, Asian/other), and nativity. At Wave IV, age is a categorical measure with the youngest category indicating those 25 or younger, and the oldest category indicating individuals 32 or older, with single years of age for the intervening ages. At Wave V, the age range begins with a category for 34 or younger and extends to those 42 or older, with single years of age for the intervening years. Some analyses control for parity, categorized as 0, 1, 2, or 3 or more children. Relationship status is measured a four-category variable indicating status at each wave: not in a relationship, dating or in a sexual relationship, cohabiting, or married. Unfortunately Wave V did not collect full histories since Wave IV nor did it collect detailed relationship information, so it is not possible to track changes in relationship status between waves or whether respondents are with the same partner at both waves. Finally, there is a control for time elapsed between waves, measured in months. Sample characteristics are shown in Table 1.

Table 1 here

Analytical Approach

After showing weighted descriptive statistics of actual and intended fertility at and across Waves IV and V, I show four sets of multivariable analyses; each is conducted for the full analytical

sample and a key subgroup(s) based on fertility characteristics, which permit identification of whether the link between fertility intentions and behaviors varies for those at different stages of the reproductive career. First, to test Hypothesis 1, there are logistic regression models predicting whether the Wave IV respondents intend to have any births in the future, with a model for the full sample (controlling for Wave IV parity) and a model for childless individuals. Second, to test Hypothesis 2a, there are logistic regression models predicting whether respondents had any births between waves. Third, to test Hypothesis 2b, there are multinomial logistic models predicting fertility goal achievement at Wave V. There are three versions of the models testing Hypotheses 2a and 2b: (1) the full analytical sample, controlling for Wave IV parity and number of children intended, (2) respondents childless at Wave IV, controlling for number of children intended, and (3) respondents who intended children at Wave IV, controlling for Wave IV parity. Fourth, to test Hypothesis 4, there are multinomial models predicting Wave V prospective fertility desires. This last analysis is conducted for the full sample of partnered individuals and for partnered individuals who had fewer children at Wave V than they intended at Wave IV. All analyses are weighted using Stata's *svy* commands to account for Add Health's sampling design, and *mi* commands were used to impute missing data for all but the key fertility variables. Missing data occurred for less than 30 respondents for most measures, with the exception of debt and household income, which were missing for between 150-200 respondents in the analytical sample.

Descriptive Statistics

The fertility behaviors and intentions of the analytical sample are shown in Table 2. At Wave IV, when most respondents were aged 26-31, more than half (56%) did not have any children, with just under a quarter having two or more (24%); the mean parity was only 0.77 children. But the

vast majority of these men and women intended to have children – and intended to have a 'normative' number of children, with a mean total intended parity of 2.28. Less than one in ten intended to be childless, and more than a third intended to have three children in total.

Table 2 here

But at Wave V, about 9 years later, these same respondents – now aged 35-40 – were considerably below that earlier intended parity, with a mean parity of 1.53. Just under a third remained childless, and only 51% had two or more children. Less than half – 48% – had a child between waves. Looking at fertility goal achievement between waves, the modal category is having fewer children than intended, at 46%. Just four in ten respondents had, at Wave V, the exact number of children they reported intending at Wave IV, with 15% having more children than intended. Given that nearly half of the men and women at Wave V had unrealized fertility, one might expect that the many would still intend to have children, but this does not appear to be the case, at least among partnered respondents. Two-thirds of dating, cohabiting, and married men and women do not intend to have a birth after Wave V (and the proportion would likely be higher among those who are unpartnered, since partnership and childbearing are so tightly linked), with 15% being unsure and 21% intending to have a child in the future.

Table 3 displays the bivariate associations between Wave IV fertility and Wave V fertility. In Panel A, Wave IV parity and future intentions are combined into a simple four - category measure indicating parenthood status by whether the respondents intend to have any children in the future. Among those with children, about half intended additional children and half did not, and among those without children, about 82% intend to have children (9.6%/9.6% + 44.6%). More interesting, though, is who actually had children between waves. Looking at the dichotomous indicator of having any children between waves, two thirds of parents (67%) who

intended to have at least one more child at Wave IV did have a birth. In contrast, among childless respondents who had intended a child in the future, only half (49%) had a child. Among those who did not intend any children at Wave IV, more parents had a child between waves than childless men and women (37% vs. 19%). Turning to fertility goal achievement and focusing on those who had intended to have children, half of those who were already parents at Wave IV had fewer children by Wave V than they had intended. More dramatic, though, is that fully three-fourths of men and women who were childless at Wave IV but intended to have children had not yet achieved their intended parity by Wave V, as they approached the end of their childbearing years.

Table 3 here

Panel B of Table 3 shows the association between the realization of Wave IV intentions by Wave V and future intentions at Wave V; recall that future fertility intentions were only asked of partnered individuals, and so the sample size is smaller and the distribution of Wave IV realized fertility intentions differs slightly from the estimates presented above. The vast majority – about eight in ten – of those who have reached or exceeded their Wave IV fertility intentions do not intend to have more children at Wave V, though some remain uncertain or seem to have increased their earlier intended family size. Perhaps more interesting, though, is that 43% of those who had not realized their intended number of births do not intend to have any children in the future, with another 20% reporting uncertainty about doing so. Less than four in ten (37%) of men and women with unrealized fertility goals have firm intentions to have a child in the future.

Multivariable Results

Wave IV Fertility Intentions

Table 4 shows the odds ratios (ORs) predicting whether Wave IV respondents intend to have any children in the future (testing Hypothesis 1), for the full analytical sample and for childless

individuals specifically. Not surprisingly, compared to those with one child, childless men and women are more likely to intend a child in the future, whereas those at higher parities are less likely to intend a child. Looking at the demographic characteristics, women are about 30% less likely to intend a child than men. Relative to non-Hispanic White respondents, respondents who belong to racially minoritized groups are more likely to intend a child among the full analytical sample, though among childless individuals, the difference is only significant for Hispanics. Foreign-born respondents are more likely to intend a child, though only in the full sample, and, compared to 28 year olds, the odds of wanting a child are highest at the youngest age group and lowest at the oldest age group.

Table 4 here

Looking at socioeconomic characteristics, the results largely support Hypothesis 1, especially among those who were childless at Wave IV. Compared to those with a college degree, less educated men and women are generally less likely to intend to have a child, while those with a post-graduate degree are more likely to intend to have a child in the future. Among childless men and women, higher levels of debt and experiences of material hardship reduce the odds of intending a child (OR = 0.93 and OR = 0.78, respectively). Respondents who had yet to achieve their educational goals but still expect to do so are more likely to intend to have a child than those who had already achieved them and, among the childless, are also more likely to do so than those who do not think they will achieve their educational goals (not shown). For childless men and women, those who characterize their jobs as either being unrelated to their career goals or who have never worked/never had career goals are about 40% less likely to intend a child in the future compared to those whose job is aligned with their career goals (and compared to those whose job is part of preparation for career goals, not shown).

Psychosocial characteristics are also relevant – as religiosity increases, individuals are more likely to intend to have a child. Conversely, as political liberalism increases, individuals are less likely to intend to have a child. Finally, relationship status is strongly linked to fertility intentions – compared to married individuals, those who are single or dating/in a sexual relationship are less likely to intend a child in the future in the full sample, and, among childless respondents, cohabitors are also less likely to intend to have a child in the future than married respondents (OR = 0.56).

Sensitivity tests also predicted the number of intended births using negative binomial regression models (not shown). The results suggest that the intended number of births is less strongly related to demographic, socioeconomic, psychosocial, and relationship characteristics than simply whether respondents intended any births. For instance, demographic differences largely disappear, though Hispanics have a higher intended family size and older respondents intend fewer children. Differences between those without a high school degree and those with a college degree in intended births are not significant, though contrasts with other levels are largely significant, suggesting that those with post-graduate degrees intend to have more children in the future than those with less education. Religion and political orientation remain important, with more religious individuals intending more births and more liberal individuals intending fewer (the latter only in the full sample, however).

Fertility Between Waves

Table 5 displays ORs from logistic regression models predicting whether respondents have any births between waves (testing Hypothesis 2a), for the full analytical sample, for childless individuals, and for those who reported intending children at Wave IV. Individuals who were at parity one are most likely to have a birth between waves, with both childless individuals and

those with two or more children about 50% less likely among the full sample, with smaller differences in the sample of those who intended any births. Even among those intended to have a birth, parents with only one child are more likely to do so than childless respondents, though they are no different than those at higher parities. Respondents who did not, at Wave IV, want any children are significantly less likely to have had any children between waves by 63%-67% compared to those who wanted one child, but there are no differences in the odds of having a child across higher intended parities at Wave IV. Demographic differences are fairly minimal; non-Hispanic Black respondents are less likely than non-Hispanic White respondents to have a birth between waves but only in the subgroups of those childless at Wave IV and those who intended at births at Wave IV. In the full sample, age is linked to the fertility as one would expect; compared to 28 year olds, those 25 and younger are 40% more likely to have had a birth by Wave V whereas those 32 and older are about 40% less likely.

Table 5 here

Looking at socioeconomic characteristics, there is modest support for Hypothesis 2a, as objective socioeconomic measures are linked to fertility between waves but fewer subjective measures are significant. Compared to those with a college degree, those with less education are less likely to have had a birth between waves. Among the childless and intended a child subgroups, greater household income at Wave IV increases the odds of having a child between waves (OR = 1.05), and owning a home at Wave IV increases the odds of having any births by about 20% relative to those who were not homeowners. Of the subjective measures of socioeconomic status, only social class position is significant – the higher one ranked themselves on the social class ladder, the more likely they are to have a child between waves (OR = 1.06).

Psychosocial characteristics are unrelated to the odds of having a birth between waves; however, self-reported health emerges as strong predictor of fertility, with a one-unit increase in self-reported health associated with a 15%-20% increase in the odds of having a child across groups. Relationship status is, unsurprisingly, a very strong predictor – compared to respondents who were married at Wave IV, all other respondents are less likely to have a child. Finally, the more time elapsed between waves, the greater the odds of having a child.

Sensitivity tests examining the number of children (not shown) revealed that individuals at parity one had more children than those with either fewer or more children at Wave IV and, as would be expected, those who intended more births had more births. Demographic differences were minimal, but those with less than a college degree had fewer children between waves than those with at least a college degree. Homeowners had more children than non-homeowners. More liberal respondents had fewer children, whereas those in better health had more children. Married respondents had more children than their unmarried counterparts.

Realization of Wave IV Fertility Intentions by Wave V

Table 6 presents the relative risk ratios (RRRs) from multinomial logistic regression predicting fertility goal achievement for the same groups (full analytical sample, childless respondents, and only those who intended children at Wave IV). These models test Hypothesis 2b. Parity at Wave IV does not affect the odds of having fewer children than intended, relative to having exactly as many as intended, among the full sample, but compared to those with only one child at Wave IV, those with fewer or more children are about 30%-40% less likely to have more children than intended. But among those who intended to have children at Wave IV, those who were childless are unlikely to have exactly as many children as they intended compared to those at parity one, being both more likely to have fewer children (RRR = 1.41) and to have more children (RRR =

1.66). The number of additional children intended is highly linked to the realization of fertility goals between waves; in general, the more children respondents intended in the future, the more likely they are to have underachieved their intended parity. Compared to those who intended only one child, those who intended more children are also less likely to have more than intended. Those who intended no children are, by definition, unable to have fewer than intended – conditional on having no children. However, among the full sample, they have an elevated risk of having more children than intended; among the childless sample, though, they are less likely than those intending only one child to have more than they intended.

Table 6 here

There are relatively few demographic differences. Compared to men, women are less likely to have more children than intended than to have realized their intended parity exactly. Non-Hispanic Black respondents are more likely to have both fewer and more children than intended, rather than the exact number intended, relative to their non-Hispanic White counterparts. Looking at the socioeconomic characteristics, there is some support for Hypothesis 2b. Wave IV education is weakly linked to the realization of fertility intentions; across all three analytical groups, those with some college/some vocational training are more likely to have fewer children than intended compared to those who completed college. Among those who were childless at Wave IV, men and women who had not finished college were three times as likely to have fewer children than intended, rather than exactly as many as they intended, and less likely to have more children than intended (by about 75%) than their counterparts with a college degree. For the full analytical sample, higher household incomes increased the chances of realizing one's Wave IV intended parity exactly; respondents who were childless at Wave IV are also less likely to have fewer children than intended as Wave IV income increased. Those who

owned their own home at Wave IV are also less likely to have fewer children than intended compared to non-homeowners by about 25% in the full analytical sample and in the sample consisting only of those who intended more births.

Of the psychosocial and health measures, only self-rated health is significant; the better one reported their health at Wave IV, the less likely they are to have fewer children than intended (RRR = 0.90 and RRR = 0.86 in the full and childless groups, respectively). Not surprisingly, relationship status is strongly related to the realization of intended births. Compared to men and women who were married at Wave IV, respondents who were unmarried are much more likely to underachieve their fertility intentions.

Future Fertility Intentions at Wave V

Finally, Table 7 shows the RRRs from multinomial logistic models predicting future fertility intentions, testing Hypothesis 3. Recall that only partnered individuals were asked about fertility intentions, and models are shown for two groups: all partnered individuals (dating/sexual relationship, cohabiting, married) and for those who, at Wave V, had fewer children than their Wave IV intended parity. All covariates are taken from the Wave V survey. As might be expected, childless respondents are much less likely than those at parity one (or higher, not shown) to intend no children. Compared to respondents with one child, childless men and women are 1.7 times as likely to intend to have a child in the future and 2.2 times as likely to be uncertain about having a child than to report they do not intend to have a child. Among those who had not realized their Wave IV intended parity, childless respondents are also more likely to be uncertain about having a child in the future relative intending to have a child. In the full sample, those who had not realized their fertility intentions are 2.2 times as likely to be uncertain and 3.5 times as likely to intend a child at Wave V than to report that they do not intend to have a

child compared to their counterparts who had exactly as many children as intended; they are also less likely to be uncertain than to intend a child (RRR = 0.63). Turning to demographic characteristics, women are less likely than men to be uncertain or to intend to have a child than to report they do not intend to have a child in the future. There are also race-ethnic differences; compared to non-Hispanic Whites, racially minoritized groups are more likely to intend to have a child in the future than to not intend, although the difference is not statistically significant between Hispanics and non-Hispanic Whites when restricted to those who have not realized their intended parity. As would be expected, age at Wave V is important – younger respondents are less likely to report not intending to have a child than being uncertain or intending.

Table 7 here

Focusing on the socioeconomic characteristics, there is modest support for Hypothesis 3. There are some educational differences, particularly among those who had not reached their intended parity by Wave V. Compared to those with a college degree, men and women with some college and lower are less likely to be uncertain or to intend to have a child rather than report they are not intending to have a child. Among partnered men and women in their late 30s who had fewer children then they had intended in their late 20s/early 30s, for instance, those with some college/some vocational training are about a third less likely to be unsure (RRR = 0.65) or to intend to have a child (RRR = 0.62) than to report they do not intend to have a child compared to their college-educated counterparts. As household income increases, the risk of being uncertain relative to not intending a birth decline. Higher levels of educational debt lower the risk of being uncertain relative to intending to have a child (RRR = 0.92 for both sub-groups). Men and women who reported any material hardship since 2008 are 24% more likely to be uncertain about having a child than to not intend to have a child compared to those who had no

such experiences. The higher one reported themselves on the social class ladder at Wave V, the more likely that are to be uncertain about having a child (RRR = 1.11 and RRR = 1.13 for the full group of partnered respondents and for just those who had fewer children than intended).

Though religion did not predict whether individuals had children between waves, the results show that more religious individual are more likely to be uncertain or to have intentions for a birth at Wave V, similar to the results predicting Wave IV fertility intentions. Unlike Wave IV intentions, however, political orientation is not a significant predictor of intended fertility at older ages. Among partnered respondents who did not realize their Wave IV intended parity by Wave V, having better self-evaluated overall health increases the risk of intending a birth in the future relative to not intending a birth. Compared to those who had no history of getting pregnant or miscarrying, men and women who had some history have a higher risk of being uncertain, by about 30% across both groups, and of intending a birth, by about 75%-80% across both groups, than of intending no births; they also have about a 25% lower risk of being uncertain relative to intending a birth. Finally, relationship status remains important – compared to married individuals, those in a dating/sexual relationship and those who are cohabiting are significantly more likely to be uncertain about having a child in the future compared to either not intending to have a birth (RRR = 1.70 and RRR = 1.77, respectively, for the full sample, with a similar pattern for those who had fewer children than intended) or to intending to have a birth (RRR = 1.68 and RRR = 1.46, respectively, for the full sample).

Discussion

The declining fertility rates in the U.S. since the Great Recession (which has almost certainly accelerated during the COVID pandemic) have spurred substantial discussion over how best to not only stop but reverse the trends. Much of this discussion has focused on the link between

economic conditions and fertility, given the extensive literature linking the two, but the field has lacked the ability to understand the mechanisms that drive the linkage. Poorer economic conditions may reduce people's intentions to have any children or the number of children they would like; it can affect the timing of when childbearing occurs, by leading individuals to postpone births; or it can increase the chances that people have greater difficulty translating intentions into behaviors.

In the paper, I used data uniquely suited to study how individuals' own socioeconomic characteristics – both objective and subjective – are linked to the formation, realization, and adjustment of fertility plans in the U.S. The Add Health cohort's age during the Great Recession, the longitudinal design of Add Health, and its rich set of measures provide an opportunity to study fertility processes that no other dataset can match. At the most basic level, there is little evidence that those in their late 20s and early 30s had decided against childbearing or wanted few children. Though more than half had yet to have children at Wave IV, the vast majority intended to have children, and the mean intended parity was 2.28. Yet a decade later, it is clear that many of the men and women in the Add Health sample had not realized their earlier fertility intentions – and were unlikely to do so in their remaining childbearing years. At Wave V, mean parity was only 1.53, and 45% had fewer children than they had intended at younger ages. Among partnered individuals in the late 30s and early 40s, two-thirds did not intend to have any children in the future, and this is almost certainly higher among those without partners.

So what goes into the formation, realization, and adjustment of fertility goals? I tested three sets of hypotheses (across different reproductive subgroups) to address specific aspects of the fertility intentions-fertility behavior nexus. First, I examined the factors linked to fertility intentions in the late 20s and early 30s, when fertility intentions are considered more stable and

solid than at earlier ages (Ni Bhrolcháin and Beaujouan 2019). I had expected that individuals who, at Wave IV, were relatively more advantaged and secure would be more likely to intend children in the future, controlling for parity, sociodemographic characteristics, and psychosocial factors (Hypothesis 1). This was largely supported, for both objective and subjective measures of economic status and security. Men and women with less education were less likely to intend to have a child than their better educated counterparts, and even those who had not yet completed their desired level of education were more likely to intend to have a child, as long as they were confident that they would achieve more education in the future. Among those who had not yet had children, debt and experiences of hardship reduced the odds of intending a child in the future, as did either having a job unrelated to career goals or never having any goals or a job. And more generally, placing oneself higher on the social class ladder increased the chances of intending a child. Thus, it seems clear that individual economic experiences affect whether individuals intend to have a child, and this is true for both concrete aspects and individual perceptions.

Next, I examined fertility between waves. In addition to intentions themselves being a strong predictor of actual fertility, a primary predictor of having a birth between Waves IV and V and having the exact number of intended children was parity at Wave IV – childless individuals were considerably less likely to have a child and more likely to underachieve their fertility goals than parents, even when controlling for fertility intentions. This supports prior work demonstrating the contribution of fertility postponement to lower completed fertility at the individual level (for work predicting fertility by Wave IV, see (Guzzo, Hayford, and Lang 2019). In terms of economic characteristics, though fewer were significant than in the model predicting intentions at Wave IV, there remained evidence that more advantaged individuals were more

likely to have a child and achieve their intentions (Hypotheses 2a and 2b), Education remains a key predictor of fertility between waves (but not strongly linked to realization of exact intended parity), and Wave IV home ownership emerges as important, with those owning a home more likely to have a birth between waves and to have achieved their exact number of children. Wave IV household income is also positively associated with the odds of having a birth among childless respondents and those who intended a child and of realizing the exact number of intended births among the full sample. Thus, not only do individuals' socioeconomic factors influence whether they wanted to have children in their early 20s and 30s, they also facilitate achieving one's fertility goals.

At the end of the reproductive years, when it is clear that many did not achieve their earlier intentions, socioeconomic factors continue to be linked to additional plans for childbearing, albeit modestly. Education remains important; among those who were partnered but had fewer children than intended, men and women with a college degree are more likely to either be uncertain – keeping the door open on future childbearing – or to intend to have a child than their less educated counterparts. Interestingly, higher levels of educational debt decreases the chances of being uncertain about future childbearing relative to intending to have a child (perhaps capturing those with high-paying professional degrees that often entail high debt but have higher income potential in the long-term), while higher levels of household income decrease the chances of being uncertain relative to not intending. Higher perceptions of one's position on the social class ladder increases the risk of being uncertain rather than intending no births, suggesting that perceptions of economic well-being might encourage people to keep open the possibility of (more) births relative to firmly deciding against it. Still, though, that so many men and women who had not realized their earlier fertility intentions do not plan to have any

children in their remaining childbearing years implies that rising birth rates in the late 30s and early 40s are unlikely to be sufficient to offset the more dramatic declines in births at younger ages.

In sum, the results show that both objective and subjective measures of individual economic circumstances influence the formation, realization, and revision of fertility goals. Both sets of economic characteristics seem most strongly linked to the formation of goals in the late 20s and early 30s, with primarily the objective characteristics influencing whether individuals have any births and realize their fertility goals as they progress through their childbearing years, and more modest support linking objective characteristics (and the single subjective characteristic) measured in the late 30s and early 40s with future fertility goals. Overall, those with more favorable economic characteristics are indeed more likely to intend births in the prime childbearing years, have births and realize their fertility intentions as time passes, and to maintain the possibility of having a birth (if not necessarily intending a birth) at the end of the childbearing years.

Limitations

Although Add Health is uniquely suited for the current analysis, the data is not without its limitations. As a school-based longitudinal sample with initial data collection in the mid-1990s, it is not representative of the full population in the U.S. Comparisons with an analogous birth cohort in the nationally representative but cross-sectional 2015-2019 National Survey of Family Growth (NSFG) reveals that the Add Health Wave V analytical sample used here has a lower mean parity (1.82 vs 1.53, respectively) and higher levels of childlessness (21.5% vs. 28.8%); thus, the point estimates of parity levels presented in this paper should not be taken as representing the entire U.S. As noted earlier, a substantial number of cases were dropped for

inconsistencies on parity; those with inconsistent reports are more disadvantaged. As such, the findings presented here could be stronger than they would be for the full population; alternatively, since disadvantaged individuals tend to have – and complete – their intended childbearing earlier in the life course, the effect of not having these individuals in the analysis of fertility during the late 20s and 30s may be minimal.

A major limitation of the data is that Add Health did not collect union histories between Waves IV and V. Sensitivity tests excluding the union status control (not shown) tended to show a greater number of significant economic predictors for the various fertility measures (along with larger coefficient sizes), suggesting that part of the link between individual economic conditions and fertility is through the ability to form stable unions. Nor is it possible, with such a long gap between Waves IV and V, to know how people's fertility intentions changed over time; certainly, some respondents did not have children, or had fewer children, because at some point they actively decided not to or reduced their intended parity, rather than simply giving up. Finally, it is worth noting that this analysis focused on fertility intentions, not desires. In general, a greater proportion of individuals report wanting a child than intending to have a child (Guzzo 2018); the mismatch between desires and intentions is likely related to economic and social factors.

Conclusion

There is some evidence that young adults in the U.S. want fewer children than in the past (Hartnett and Gemmill 2020), which does not portend well for a reversal of recent fertility declines. And, since many of those who reported in their late 20s and early 30s that they intended to have children in the future but did not do so by their late 30s and do not plan to have any (more) children, shifts in birth timing and rising birth rates at older ages will be insufficient to raise birth rates in the aggregate. But these findings suggest that lower intended parities

themselves are driven by individuals' economic circumstances, which also later influence whether people realize their fertility intentions. Low fertility in the U.S. is not inevitable but, instead, seems strongly linked to individuals' experiences during the transition to adulthood – the ability to achieve desired educational levels, find secure employment offering a living wage, buy a home, and, of course, find a partner with whom to have children. Thus, efforts to address economic inequalities and provide more educational, career, and home ownership opportunities could have a positive impact on fertility both directly, as suggested here, and indirectly, through the link between these factors and partnership.

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Table 1. Weighted Demographic, Socioeconomic, Psychosocial, Health, and Relationship Characteristics of the Analytical Sample (N = 8,956) at Waves IV and Wave V

Wave IV			*Wave V*	
Demographic characteristics				
Female		52%		
Race-ethnicity				
	non-Hispanic White	70%		
	non-Hispanic Black	12%		
	Hispanic	11%		
	Asian/other	8%		
Foreign-born		5%		
Age			Age	
	25 or younger	5%	34 or younger	7%
	26	15%	35	13%
	27	17%	36	16%
	28	17%	37	17%
	29	16%	38	17%
	30	17%	39	15%
	31	11%	40	11%
	32 or older	2%	41	3%
			42 or older	1%
Objective socioeconomic characteristics				
Education				
	Less than high school	5%		4%
	High school/GED	16%		14%
	Some college/vocational training	30%		25%
	Associate's/vocational degree	14%		17%
	Bachelor's degree	22%		22%
	Some graduate school	5%		4%
	Master's/PhD/Professional degree	8%		15%
Household income				
	<$5,000	2%	<$5,000	4%
	$5,000-9,999	2%	$5,000-9,999	2%
	$10,000-14,999	3%	$10,000-14,999	3%
	$15,000-$19,999	3%	$15,000-$19,999	2%
	$20,000-$24,999	5%	$20,000-$24,999	3%
	$25,000-$29,999	5%	$25,000-$29,999	3%
	$30,000-39,999	12%	$30,000-39,999	7%
	$40,000-$49,999	12%	$40,000-$49,999	8%
	$50,000-$74,999	26%	$50,000-$74,999	18%
	$75,000-$99,999	16%	$75,000-$99,999	16%
	$100,000-$149,999	11%	$100,000-$149,999	18%
	$150,000 or more	4%	$150,000-$199,000	8%
			$200,000 or more	7%
Total non-mortgage debt			Educational debt	
	$1-4,999	13%	<$10,000	13%
	$5-9,999	16%	$10,000-24,999	12%
	$10-24,999	28%	$25,000-49,999	10%
	$25-49,999	19%	$50,000-99,999	9%
	$50-99,999	9%	$100,000-249,999	4%
	$100-249,999	4%	$250,000-499,999	1%
	$250,000 or more	1%	$500,000-999,999	0%
			$1,000,000 or more	0%
			Non-mortgage, non-educational debt	
			none	14%

		$10,000-24,999	25%
		$25,000-49,999	16%
		$50,000-99,999	7%
		$100,000-249,999	3%
		$250,000-499,999	1%
		$500,000-999,999	0%
		$1,000,000 or more	0%
Own home	43%		67%
Material hardship in last year	23%	Material hardship since 2008	50%
Subjective Socioeconomic Characteristics			
Educational status relative to desires			
Achieved educational goals	25%		
Not yet achieved but think will achieve	65%		
Not achieved, do not think will achieve	9%		
Employment status relative to goals			
Part of goals	40%		
Preparation for goals	25%		
Not related to goals	26%		
No goals/never worked	8%		
Position on social class ladder			
1	2%		3%
2	5%		4%
3	12%		9%
4	17%		12%
5	28%		22%
6	18%		19%
7	13%		18%
8	5%		9%
9	1%		3%
10	1%		2%
Psychosocial & health characteristics			
Importance of religion			
Not important	17%		23%
Somewhat important	32%		30%
Very important	41%		33%
More important than anything else	10%		13%
Political orientation			
Very conservative	4%		5%
Conservative	20%		21%
Middle	49%		50%
Liberal	20%		17%
Very liberal	6%		6%
Self-rated health			
Poor	1%		2%
Fair	7%		11%
Good	31%		32%
Very good	41%		38%
Excellent	20%		17%
Self-reported fecundity issues	13%		13%
Relationship status			
Single	21%		16%
Dating/in a sexual relationship	17%		10%
Cohabiting	19%		13%
Married	43%		60%

Table 2. Weighted Fertility Characteristics of the Analytical Sample (N = 8,956) at Waves IV and V (standard errors in parentheses)

Wave IV		
Mean parity		0.77
		(0.03)
Parity distribution		
	0	56.4%
	1	19.8%
	2	16.1%
	3 or more	7.7%
Mean intended parity		2.28
		(0.02)
Intended parity distribution		
	0	9.6%
	1	11.6%
	2	44.1%
	3 or more	34.7%
Wave V		
Mean parity		1.53
		(0.03)
Parity distribution		
	0	30.5%
	1	18.5%
	2	29.6%
	3 or more	21.4%
Had child between waves		47.7%
Realization of Wave IV Fertility Intentions		
	Fewer	45.8%
	Exact	39.1%
	More	15.3%
Future fertility (partnered individuals, n=7,248)		
	Does not intend	64.2%
	Not sure	14.5%
	Intends	21.3%

Table 3. Weighted Bivariate Statistics of Fertility Intentions and Behaviors Across and Within Waves

Panel A (Full Analytical Sample, N = 8,956)

	Fertility b/w Waves IV and V		Realization of Wave IV Intended Parity by Wave V			
	No children	At least 1 child	Fewer than intended	Exactly as many as intended	More than intended	*Overall distribution*
Wave IV Parenthood by Future Intentions						
Has children, does not intend more	62.7%	37.3%	0.0%	62.7%	37.3%	22.9%
Has children, intends more	33.0%	67.0%	50.8%	37.9%	11.3%	22.9%
No children, does not intend any	81.4%	18.6%	0.0%	81.4%	18.6%	9.6%
No children, intends at least 1	50.6%	49.4%	76.1%	18.5%	5.4%	44.6%
Overall distribution	*52.3%*	*47.7%*	*45.5%*	*39.1%*	*15.3%*	

Panel B (Partnered at Wave V, N = 7,248)

	Wave V Future Fertility Intentions			
	Does not intend	Not sure	Intends	*Overall distribution*
Realization of Wave IV Intended Parity by Wave V				
Fewer than intended	42.5%	20.4%	37.1%	44.1%
Exactly as many as intended	80.7%	10.3%	9.0%	42.1%
More than intended	83.2%	8.6%	8.2%	13.8%
Overall distribution	*64.2%*	*14.5%*	*21.3%*	

Table 4. Odds Ratios from Logistic Regression Models Predicting Whether Wave IV Respondents Intend Any Children in the Future

		Full Analytical Sample	Childless Respondents
WIV parity			
	0	2.28***	
	1	-	
	2	0.24***	
	3 or more	0.13***	
Demographics			
Female		0.70***	0.72**
Race-ethnicity			
	non-Hispanic White	-	-
	non-Hispanic Black	1.21	1.27
	Hispanic	1.52***	1.49*
	Asian/other	1.34	0.91
Foreign-born		1.50*	1.65
WIV age			
	25 or younger	1.87**	2.34**
	26	1.16	1.03
	27	1.19	1.12
	28	-	-
	29	0.87	0.84
	30	0.85	0.80
	31	0.81	0.67
	32 or older	0.46**	0.46
Objective Socioeconomic Characteristics at WIV			
Education			
	Less than high school	0.43***	0.51*
	High school/GED	0.57***	0.54**
	Some college/vocational training	0.77	0.73
	Associate's/vocational degree	0.60***	0.63*
	Bachelor's degree	-	-
	Some graduate school	1.24	1.49
	Master's/PhD/professional degree	1.47*	1.95*
Household income		1.01	1.01
Total household debt, excluding mortgage		0.98	0.93*
Own home		0.83**	1.06
Any material hardship in past year		1.06	0.78*
Subjective Socioeconomic Characteristics at WIV			
Educational status relative to desires			
	Achieved desired education	-	-
	Not yet achieved but think will achieve	1.27*	1.62**
	Not achieved, do not think will achieve	0.98	1.04
Employment status relative to goals			
	Part of goals	-	-
	Preparation for goals	0.87	0.87

Not related to goals	0.87	0.61***
No goals/never worked	0.82	0.60*
Position on social class ladder	1.07**	1.04
Psychosocial & Health Characteristics at WIV		
Importance of religion	1.36***	1.42***
Political orientation	0.90*	0.88*
Self-rated health	1.04	1.02
Self-reported fecundity issues	1.28	1.33
Relationship Status		
Single	0.54***	0.38***
Dating/in a sexual relationship	0.75*	0.53***
Cohabiting	0.88	0.56**
Married	-	-
Constant	1.45	6.59***
N	8956	5086

*p < 0.05, **p < 0.01, ***p < 0.001

Table 5. Odds Ratios from Logistic Regression Predicting Any Births Between Waves IV and V

	Full Analytical Sample	Childless Respondents	Intended any at WIV
WIV parity			
0	0.49***		0.62***
1	-		-
2	0.56***		0.76
3 or more	0.49***		0.60
WIV number additional intended			
0	0.37***	0.33***	
1	-	-	-
2	1.00	0.99	0.98
3 or more	1.11	1.09	1.10
Demographics			
Female	0.99	1.11	1.04
Race-ethnicity			
non-Hispanic White	-	-	-
non-Hispanic Black	0.90	0.63***	0.77*
Hispanic	1.12	1.09	1.01
Asian/other	0.95	0.97	0.92
Foreign-born	1.15	0.93	1.26
WIV age			
25 or younger	1.40*	1.46	1.30
26	1.26	1.22	1.35*
27	1.21	1.17	1.19
28	-	-	-
29	1.05	1.05	1.18
30	0.93	0.97	0.98
31	0.82	0.88	0.92
32 or older	0.58*	0.86	0.61
Objective Socioeconomic Characteristics at WIV			
Education			
Less than high school	0.67*	0.28***	0.55*
High school/GED	0.62***	0.68*	0.66*
Some college/vocational training	0.69***	0.68**	0.68***
Associate's/vocational certification	0.69***	0.65**	0.76*
Bachelor's	-	-	-
Some graduate school	0.85	0.86	0.79
Master's/PhD/Professional degree	1.07	1.06	0.98
Household income	1.01	1.05*	1.05*
Total household debt, excl. mortgage	1.00	1.01	0.99
Own home	1.19*	1.23*	1.23*
Any material hardship in past year	1.06	1.06	0.92
Subjective Socioeconomic Characteristics at WIV			
Educational status relative to goals			
Achieved desired education	-	-	-
Not yet achieved but expect to achieve	1.03	1.09	0.95

Not achieved, do not expect to achieve	1.08	1.42	1.10
Employment status relative to goals			
Part of goals	-	-	-
Preparation for goals	0.91	0.89	0.97
Not related to goals	0.94	0.96	1.03
No goals/never worked	0.91	0.83	0.95
Position on social class ladder	1.02	1.05	1.06*
Psychosocial & Health Characteristics at WIV			
Importance of religion	1.03	1.07	1.08
Political orientation	0.96	0.90	0.95
Self-rated health	1.15***	1.21***	1.15*
Self-reported fecundity issues	1.05	0.84	0.90
Relationship Status			
Single	0.36***	0.18***	0.25***
Dating/in a sexual relationship	0.48***	0.33***	0.40***
Cohabiting	0.79**	0.50***	0.69***
Married	-	-	-
Number of months between W4 & W5	1.01*	1.01	1.01**
Constant	0.81	0.25	0.23*
N	8956	5086	6180

*p < 0.05, **p < 0.01, ***p < 0.001

Table 6. Relative Risk Ratios from Multinomial Logistic Regression Predicting Realization of Wave IV Fertility Intentions by Wave V

	Full Analytical Sample		Childless Respondents		Intended Any at Wave IV	
	Fewer than intended	More than intended	Fewer than intended	More than intended	Fewer than intended	More than intended
WIV parity						
0	1.11	0.59***			1.41**	1.66*
1	-	-			-	-
2	1.08	0.69**			1.23	1.19
3 or more	1.31	0.61**			1.59	1.38
WIV number additional intended						
0	0.00***	1.30*	0.00***	0.55**		
1	-	-	-	-	-	-
2	2.48***	0.40***	1.95***	0.21***	2.28***	0.29***
3 or more	13.97***	0.75	12.33***	0.38*	12.72***	0.50
Demographics						
Female	0.88	074**	0.91	0.84	0.84	0.62**
Race-ethnicity						
non-Hispanic White	-	-	-	-	-	-
non-Hispanic Black	1.35*	1.35*	1.73*	1.31	1.43*	1.67*
Hispanic	1.14	1.40*	0.99	0.80	1.16	1.52
Asian/other	1.23	1.17	1.23	1.23	1.26	1.31
Foreign-born	0.82	1.28	1.25	1.99*	0.86	1.54
WIV age						
25 or younger	1.22	1.45	1.56	1.46	1.07	0.80
26	0.79	1.23	0.95	1.34	0.80	1.27
27	1.09	0.94	1.10	0.65	0.98	0.51
28	-	-	-	-	-	-
29	1.17	0.99	1.37	0.83	1.23	1.23
30	1.12	0.82	1.17	0.83	1.06	0.63
31	0.95	0.72	1.24	0.79	0.94	0.68
32 or older	1.71	0.67	1.44	0.68	1.93	1.02
Objective Socioeconomic Characteristics at WIV						
Education						
Less than high school	1.53	0.86	3.01*	0.26*	1.56	0.92
High school/GED	1.26	0.85	1.34	0.96	1.37	1.23
Some college/vocational training	1.40**	0.97	2.00***	1.12	1.49**	1.29
Associate's/vocational certification	1.15	0.70	1.26	0.63	1.12	0.57
Bachelor's	-	-	-	-	-	-
Some graduate school	1.05	1.37	1.15	1.67	1.07	1.55
Master's/PhD/Professional degree	1.02	1.55	0.92	1.32	1.03	1.58
Household income	0.95**	0.94**	0.94*	0.98	0.96	0.97
Total household debt, excl. mortgage	1.01	0.99	1.01	0.97	1.00	0.94
Own home	0.78**	1.13	0.83	1.51*	0.74**	0.87
Any material hardship in past year	0.99	1.18	0.99	1.32	0.97	1.04

Subjective Socioeconomic Characteristics at WIV						
Educational status relative to goals						
Achieved desired education	-	-	-	-	-	-
Not yet achieved but expect to achieve	1.28*	1.16	1.11	1.19	1.24	1.00
Not achieved, do not expect to achieve	0.95	1.20	0.70	1.57	1.01	1.52
Employment status relative to goals						
Part of goals	-	-	-	-	-	-
Preparation for goals	0.88	0.93	0.93	1.09	0.92	1.12
Not related to goals	0.96	0.91	0.89	1.15	1.02	1.23
No goals/never worked	0.87	0.87	1.01	1.28	0.88	0.95
Position on social class ladder	0.94	0.96	0.95	1.00	0.95	1.00
Psychosocial & Health Characteristics at WIV						
Importance of religion	0.93	0.94	0.91	0.90	0.94	0.98
Political orientation	1.05	0.99	1.09	1.01	1.05	0.99
Self-rated health	0.90*	1.16**	0.86*	1.10	0.90	1.16
Self-reported fecundity issues	1.14	1.04	1.25	0.92	1.05	0.70
Relationship Status						
Single	3.13***	0.76	4.43***	0.40***	3.02***	0.66
Dating/in a sexual relationship	2.26***	0.71	2.59***	0.67	2.20***	0.64
Cohabiting	1.61***	0.89	1.76***	0.59*	1.51***	0.66
Married	-	-	-	-	-	-
Number of months between W4 & W5	0.99*	1.00	0.99	0.99	0.99*	1.01
Constant	6.08*	0.73	4.06	1.70	4.83*	0.25
N	8956		5086		6180	

*p < 0.05, **p < 0.01, ***p < 0.001

Table 7. Relative Risk Ratios from Multinomial Logistic Regression Predicting Wave V Fertility Intentions among Respondents Partnered at Wave V

	All respondents partnered at WV			Partnered and had fewer children than intended		
	Not sure vs. does not intend	Intends vs. does not intend	Not sure vs. intends	Not sure vs. does not intend	Intends vs. does not intend	Not sure vs. intends
WV parity						
0	2.20***	1.67***	1.32	2.44***	1.71***	1.43*
1	-	-	-	-	-	-
2	0.66**	0.23***	2.83***	0.64**	0.19***	3.37***
3 or more	0.58*	0.34***	1.69	0.37***	0.19***	1.95**
Realization of WIV intentions						
Fewer than intended	2.21***	3.52***	0.63**			
Exactly as many as intended	-	-	-			
More than intended	1.00	0.88	1.14			
Demographics						
Female	0.65***	0.60***	1.08	0.56***	0.50***	1.12
Race-ethnicity						
non-Hispanic White	-	-	-	-	-	-
non-Hispanic Black	1.40	1.74**	0.80	1.54*	1.38*	1.12
Hispanic	0.90	1.38*	0.65*	0.83	1.12	0.74
Asian/other	1.92***	2.20***	0.87	1.54	1.81*	0.85
Foreign born	1.15	1.29	0.89	1.16	1.38	0.84
WV age						
34 or younger	1.77*	2.54***	0.70	1.99**	2.91***	0.68
35	1.75**	2.22***	0.79	1.78**	2.14***	0.83
36	1.43*	1.53**	0.94	1.16	1.54**	0.76
37	1.54**	1.35*	1.14	1.68**	1.42*	1.18
38	-	-	-	-	-	-
39	0.94	0.83	1.14	0.91	0.76*	1.20
40	1.11	0.57**	1.95*	1.13	0.67*	1.69*
41	0.49	0.57	0.87	0.67	0.68	0.99
42	0.58	0.78	0.74	0.40	0.85	0.47
Objective Socioeconomic Characteristics at WV						
Education						
Less than high school	0.61	0.80	0.76	0.51*	0.70	0.73
High school/GED	0.48***	0.69	0.69	0.44***	0.65*	0.68
Some college/vocational training	0.73	0.73*	1.01	0.65*	0.62***	1.05
Associate's/vocational certification	0.83	0.70*	1.19	0.72	0.71	1.02
Bachelor's	-	-	-	-	-	-

Some graduate school	1.22	0.77	1.59	1.26	0.96	1.31
Master's/PhD/Professional degree	1.14	1.10	1.03	1.12	1.23	0.92
Household income	0.95*	0.98	0.96	0.92**	0.98	0.94
Educational debt	0.95	1.04	0.92*	0.94	1.02	0.92*
Non-educational, non-mortgage debt	1.05	0.98	1.07	1.05	1.02	1.03
Own home	0.95	0.85	1.11	1.00	0.84	1.19
Any material hardship since 2008	1.24*	1.09	1.14	1.14	1.00	1.13
Subjective Socioeconomic Characteristics at WV						
Position on social class ladder	1.11*	1.04	1.07	1.13*	1.05	1.08
Psychosocial & Health Characteristics at WV						
Importance of religion	1.17*	1.22***	0.96	1.07	1.18**	0.90
Political orientation	1.10	0.96	1.16	1.09	0.96	1.13
Self-rated health	0.97	1.11	0.87	1.07	1.18**	0.90
Self-reported fecundity issues	1.32*	1.80***	0.73*	1.29*	1.74***	0.74*
Relationship Status						
Dating/in a sexual relationship	1.70***	1.01	1.68***	1.56**	1.09	1.44*
Cohabiting	1.77***	1.22	1.46*	1.69***	1.20	1.41
Married	-	-	-	-	-	-
Constant	0.07***	0.10***	0.63	0.16**	0.29*	0.56
N		7248			5680	

*p < 0.05, **p < 0.01, ***p < 0.001