Unrealized Fertility Over the Life Course

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Abstract

Unrealized fertility has gained growing attention within demography amid persistent low fertility and the recognition that people are ending their reproductive lives with fewer children than desired. Yet, the implications of unrealized fertility—as a reflection of unmet family-building aspirations—can affect people throughout the reproductive life course, not only at its end. Using novel pilot data from a U.S.-based sample of 2,700 individuals aged 18-69, this paper examines how experiences of unrealized fertility vary across age groups, as well as how its perceived causes and consequences differ by life stage. We operationalize unrealized fertility using a direct question about whether respondents have had fewer children than they desire at their current age. Preliminary findings indicate that at least 20 percent of both men and women report unrealized fertility across the age range, with the highest prevalence among those in their peak reproductive years (ages 25-44). By their late 40s and early 50s, men and women respectively are less likely to report having fewer children than desired, possibly reflecting *ex post* rationalization or having contentedly adjusted to their achieved family size. The final paper will further explore age, gender and parental status differences in reported reasons for unrealized fertility and will distinguish between experiences of unrealized fertility that respondents describe as deeply impactful and those with minimal personal significance.

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Extended Abstract

Introduction

Over the past few decades, demographic research on unrealized fertility—the experience of having fewer children than desired—has expanded rapidly, particularly in low-fertility settings. Research from the United States, however, has lagged behind that from other high-income contexts. Two main factors help explain this gap. First, the U.S. maintained relatively high period fertility until about fifteen years ago, when it declined and remained well below replacement level. This shift drew attention to the individual-level reality that many people were ending their reproductive years with fewer children than they desired. Second, the measurement of unrealized fertility in the U.S. has been constrained by data limitations. The most common approach to measuring unrealized fertility globally is to compare an individual's desired family size to their actual family size towards the end of the reproductive period (Casterline and Han 2017; Yeatman and Smith-Greenaway under review). Most U.S. surveys used to measure fertility processes (e.g., National Survey of Family Growth; General Social Survey), however, ask about fertility *intentions* rather than *desires*, which limits the ways in which unrealized fertility can be measured in the U.S. (Morgan & Rackin 2010).

In the context of sustained low fertility in the U.S. and growing demand for assisted reproductive technologies, there is an urgent need to better understand the prevalence, causes, and consequences of unrealized fertility in the U.S. (Hamilton et al., 2024; Stephen et al., 2016; Tierney, 2022). Despite limited measurement, there are reasons to think that unrealized fertility is increasing and a serious concern in the U.S. First, fertility intentions (i.e., how many children people *intend* to have*)* among women in their 20s remain above two children (Guzzo & Hayford, 2023; Hartnett & Gemmill, 2020), which substantially exceeds the period total fertility rate of 1.7 and exceeds completed fertility in recent cohorts by one-third of a birth for women and one-half for men (Guzzo & Hayford, 2023). These aggregate estimates suggest that falling short of one's desired number of children is a common experience.

Limited existing evidence at the individual level supports this. For example, Morgan and Rackin (2010) found that 35% of women and 43% of men in the NLSY79 cohort had, in their 40s, under-achieved the parity they intended in young adulthood. Additionally, a recent Pew Foundation study found that 38% of Americans aged 50 and over who did not have kids reported having wanted them at some point (Minkin et al., 2024). Similarly, a third of U.S.-based respondents over age 50 who participated in a recent UNFPA poll reported ideals that exceeded their achieved family size (UNFPA 2025).

Although unrealized fertility has typically been measured at the end of reproduction, individuals can have fertility goals that are unmet at earlier stages of reproduction. Delayed entre into parenthood or frustrated aspirations for another child could meaningfully impact people's mental health and well-being earlier in the life course and not only at the end of reproduction. However, this idea has received very limited empirical attention. In this paper, we use an online survey of 2,700 U.S.-based respondents between the ages of 18-69 to measure unrealized fertility over the life course. We do this through measuring unrealized fertility directly, asking respondents whether they had fewer children than they desired. We further examine how the perceived causes and consequences of unrealized fertility vary by age.

Data

The data used in our study were collected by the authors in 2025 through a partnership with a marketing firm that works with major third-party panel providers like Cint, Dynata and Prodege. These are the same panels used in many U.S. presidential and public opinion polls. The firm allowed us to add a fertility module to their larger survey of consumer interests and health and wellbeing. We conducted a pilot test of the fertility module with an online sample of 287 respondents and subsequently lightly revised questions based on response distributions on the pilot. The main survey was conducted in March 2025. We used quota sampling to balance respondents to the 2020 U.S. Census on age, gender, and income and further monitored geography and race/ethnicity closely during data collection to maintain alignment with U.S. Census distributions. The project was considered not to be human subjects research by the Colorado Multiple Institution Review Board (COMIRB) because the researchers have no access to personally identifiable information

Measures

Direct measure of unrealized fertility: We asked respondents beyond their childbearing years (defined as 45+ for women and 55+ for men): "Do you wish you had had more children?" if they report having had children and "Do you wish you had had children?" if they report no children. Respondents in their childbearing years were asked variants of the same questions: "Do you wish you had had more children by now?" or "Do you wish you had had children by now?" Response options included "yes", "no" and "unsure". We consider respondents to have unrealized fertility if the wish they had more children than they do, regardless of age, and to be uncertain about having realized their fertility goals if they answered "unsure".

Perceived reasons for unrealized fertility: First, to identify whether respondents could articulate the reasons they had fewer children than desired, we asked all respondents with unrealized fertility: "Are you able to clearly list the reasons why you've had fewer children than you'd like at this point in your life?" Response options included: "yes—I can clearly articulate the reasons", "somewhat—I have a general sense", "not really—I've thought about it but can't pinpoint specific reasons", and "no—I haven't reflected much on the reasons". Second, we adapted a question used in the 2018 Spanish National Fertility Study (Cui et al., 2025)[1] to solicit the main reasons that people had fewer children than they wanted at that point in their life (or overall, for those who aged out of reproduction). Regardless of their answer to the prior question, all respondents with unrealized fertility were asked to complete the following statement: "I've had fewer children than I want because…" or "I've had fewer children than I want at this point in my life because…" followed by a list of 26 potential reasons, including "other". We developed the list of response options by drawing on the literature on unrealized fertility in high-income settings as well as response options included in the Spanish survey as well as those used in the U.S. Gallup poll (2013) that asked people to speculate why couples might not have more children. We grouped responses into six broad categories: "health and biological factors", "partner-related reasons", "resources and costs", "environmental and social concerns", "emotional and psychological factors", and "personal goals and priorities". Response groups and response options within groups were designed to vary randomly for each respondent to reduce the risk of bias due to the order in which they were presented in the survey.

[1] The 2018 Spanish Encuesta de Fecundid included a question asking respondents, "Why does the number of children you've had not match the number you wanted to have?" (*¿Por qué motivo el número de hijos que ha tenido no coincide con el que hubiera deseado tener?)* Respondents who had fewer children than they desired at that point in their lives then completed the sentence: "I've had fewer children than desired because…*" (Ha tenido menos hijos de los deseados por)* to which they could indicate up to three responses.

Most impactful unrealized fertility: To assess the perceived impact of having unrealized fertility on respondents, we ask all respondents with unrealized fertility: "How has not having had the number of children you would like affected your satisfaction with life?" Response options included: "It has **greatly decreased** my long-term life satisfaction", "It has **somewhat decreased** my long-term life satisfaction", "It has had **little to no impact** on my long-term life satisfaction", and "Not sure" (bold font in original).

Analysis

We divide the sample into five age groups that represent phases of the reproductive- and post-reproductive life course: 18-24 (early reproductive ages), 25-34 (middle reproductive ages), 35-44 (late reproductive ages), 45-54 (recently post-reproduction), and 55-69 (post-reproduction). Additionally, because childbearing is itself critical to understanding unrealized fertility, we examine levels of unrealized fertility by parity, grouping respondents into those with 0 children, 1 child, 2 children, and 3+ children.

Preliminary Results

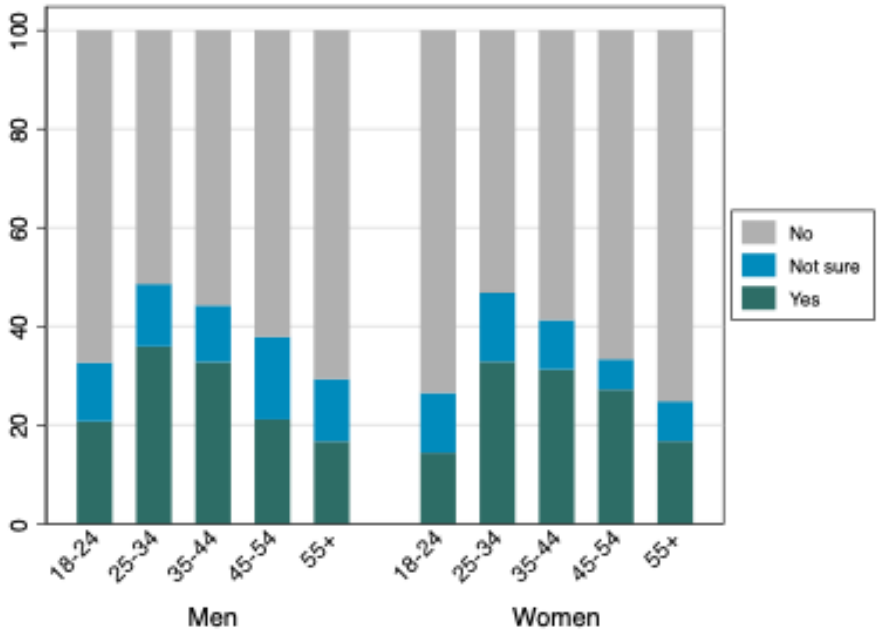
Table 1 presents descriptive statistics of the sample by gender. The sample has higher levels of education than the U.S. population. Mean number of children ever born is 1.15 for men and 1.30 for women (not shown). 46.2% of men in the sample and 40.3% of women do not (yet) have children.

Table 1. Descriptive statistics of analytic sample by gender

	Men	Women
Age		
18-24	14.2	13.6
25-34	20.8	19.9
35-44	21.1	20.2
45-54	18.4	18.2
55+	25.5	27.9
Education		
High school	27.4	25.9
Some college	28.2	33.2
Bachelor's	25.4	24.8
Graduate School	19.1	16.1
# of children		
0	46.2	40.3
1	17.6	19.9
2	22.6	21.9
3+	13.7	17.9
Have fewer children than desired		
Yes	25.5	24.5
No	61.5	65.7
Unsure	13.1	9.9
N	1,363	1,329

Overall, a quarter of respondents report having fewer children at their age than desired, and an additional 13.1% of men and 9.9% of women report being unsure. Figure 1 presents the distribution of unrealized fertility by age and gender. Men and women show a similar distribution of having fewer children than they desired by age. Unrealized fertility is lowest at both ends of the age distribution and peaks at 35.9% for men and 32.8% for women in the 25-34 age range. Men have higher unrealized fertility in early adulthood and women have slightly higher levels of unrealized fertility in ages 45-54 though neither difference reaches statistical significance. In the oldest age group, 55-69 years, the prevalence of unrealized fertility for both men and women falls to 17%.

Figure 1. Prevalence of unrealized fertility by age and gender



Across the age range, a minority of respondents reported being unsure whether they wished they had had more children than they did have. Being unsure whether one has had fewer children than desired is particularly common among men regardless of age. For women, uncertainty starts off high before declining with age. When unrealized fertility and uncertainty are combined, the age pattern for men and women are almost identical.

Planned Analyses

The final paper will further explore age, gender and parental status differences in reported reasons for unrealized fertility and will distinguish between experiences of unrealized fertility that respondents describe as deeply impactful and those with minimal personal significance. In addition to descriptive analyses, we will use multivariable logistic regression to better understand the drivers of unrealized fertility over the life course.

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