Breastfeeding Success and Expectations for More Children

Vida Maralani, Cornell Sociology

Draft abstract submitted for review for PAA 2019 Meetings

Although fertility intentions do not necessarily predict how many children people actually bear, they do teach us something about future expectations and demographic schema across the life course. Similarly, when we see fertility intentions diverging systematically between groups, this potentially reveals important differences about future expectations and life views across groups. Differences between fertility intentions and the fertility people achieve is an important way through which demographers can study the interplay between preferences and constraints across the life course. Culturally informed models of demographic behavior, for example, highlight the interaction of material resources and schema or preferences in shaping outcomes across the life course (Bachrach and Morgan 2013). Divergence between fertility intentions and how many children people actually bear can shed light on the important intersection of resources, constraints, and preferences in shaping demographic behavior across the life course.

In the U.S., women generally lower their fertility intentions across the life course, and highly educated women systematically fall short of achieving their intended fertility primarily through the mechanism of fertility delay (Morgan and Rackin 2010, Hayford 2009). In this study, I show how symbolic success in childrearing can cause women to increase their fertility intentions. Prior research shows that women who breastfeed for longer durations have more children overall than women who breastfeed for shorter durations (Maralani 2018). Using a life course approach, I examine the fertility intentions of women based on how long they breastfeed their firstborn. I examine these fertility intentions from two years before first birth to nine years after birth in order to determine when in the life course women change their fertility intentions with respect to their breastfeeding practices. The results show a novel pattern that supports the idea of symbolic success. Although women do not differ in their fertility intentions before the start of childbearing based on how long they breastfeed their firstborn (when they finally have that child), women who breastfeed for longer durations systematically increase their fertility intentions in the year that they have their firstborn. Succeeding at breastfeeding may serve as a signal that women can fulfill the cultural and "expert-driven" expectations of modern intensive parenting. Given this signal of success, women increase how many children they expect to have.

Data and Methods

The analyses use the 1979 to 2012 waves of the National Longitudinal Survey of Youth 1979 (NLSY79), a nationally representative sample of respondents ages 14 to 22 when first surveyed in 1979. The data were collected annually from 1979 to 1994, then every other year from 1996 to 2012. The NLSY contains detailed information on education, wages, income, childbearing, marriage, and family characteristics. The data also include detailed questions on breastfeeding practices and fertility expectations. I omit the military and poor white oversamples because these are not followed all survey years, and use the 1979 probability weights to adjust for the survey's complex design.

The NLSY79 measured expected fertility in the survey's first wave in 1979, then annually from 1982 to 1986, then every other year in subsequent waves. The survey measured fertility expectations with this question: "Altogether, how many (more) children do you expect to have?" At the first survey wave in 1979, about 20% of the cohort already had children, predominantly the first births of women who gave birth at young ages. For these women, fertility expectations are necessarily measured after the start of childbearing. For the remaining women, it is possible to measure expectations before childbearing begins. I conduct the analyses for a sample of women who have their first births in 1981 or later so that I capture fertility expectations at least one year before the conception that resulted in the women's first birth. I also check the robustness of my findings on the full sample of mothers, regardless of whether expectations are measured before or after first birth. The results are quite similar across these two samples.

I group women into four breastfeeding categories. The first category includes women who did not initiate breastfeeding, approximately 48% of the NLSY79 sample. The other three categories represent the tertiles of the observed breastfeeding distribution for women who initiate any breastfeeding. These categories include breastfeeding 1-6 weeks (bottom third), breastfeeding 7-21 weeks (middle third), and breastfeeding 22 weeks or longer (top third). The breastfeeding categories represent any breastfeeding, rather than breastfeeding exclusively.
The NLSY includes prospective information about births, as well as detailed birth histories. I use the information collected on all the children a woman bears to determine her total family size and the intervals that pass between her births. I anchor all analyses to the timing of the first birth and

whether women breastfed that child, and if so, for how long. I conceptualize time in months organized around the month and year of the first birth. I array women's reproductive histories and personal and family characteristics from two years before the first birth (24 months) to up to 10 years after the first birth (120 months).

I use linear fixed effects model to predict fertility intentions (number of children expected) for women with at least one child. The model includes individual fixed effects and time fixed effects in months (from 24 months before first birth to 120 months after). I allow interactions between time and breastfeeding type, marital status, age at first birth, and education. Also known as an event study model, this approach nets out all time-invariant preferences and characteristics of individuals and parenting experiences (anticipation of first child; disruption/exhaustion of first year after birth). Only interactions over time remain identified in the model. I conduct robustness checks that confirm that results are nearly identical when I include all mothers rather than only those with first births in 1981 and later, and when I use a standard linear regression rather than a fixed effects specification (results not shown).

Preliminary Results

Women breastfeed for relatively short durations in the U.S. In this sample, about 47% of women did not initiate breastfeeding. Among those who did breastfeed, the median duration was 13 weeks and the interquartile range falls between 5 and 26 weeks. Even among those who initiate, very few reach the recommended duration of breastfeeding for one year—only 10% of mothers who breastfeed do so for 52 weeks or longer.

Figure 1 shows that, among mothers, women who breastfeed for longer durations have more children than those who breastfeed for shorter or not at all. In earlier work (Maralani 2018), I show that these fertility differences are not explained by differences in resources such as wages, long-term family income, or education, or by differences in leaving the labor force, age at first birth, or marital status at birth. I also find that women who breastfeed do not differ in their fertility expectations two years before they begin childbearing. What then, might explain these observed differences in achieved fertility?

Figure 1. Total Number of Children by Breastfeeding Duration, NLSY79

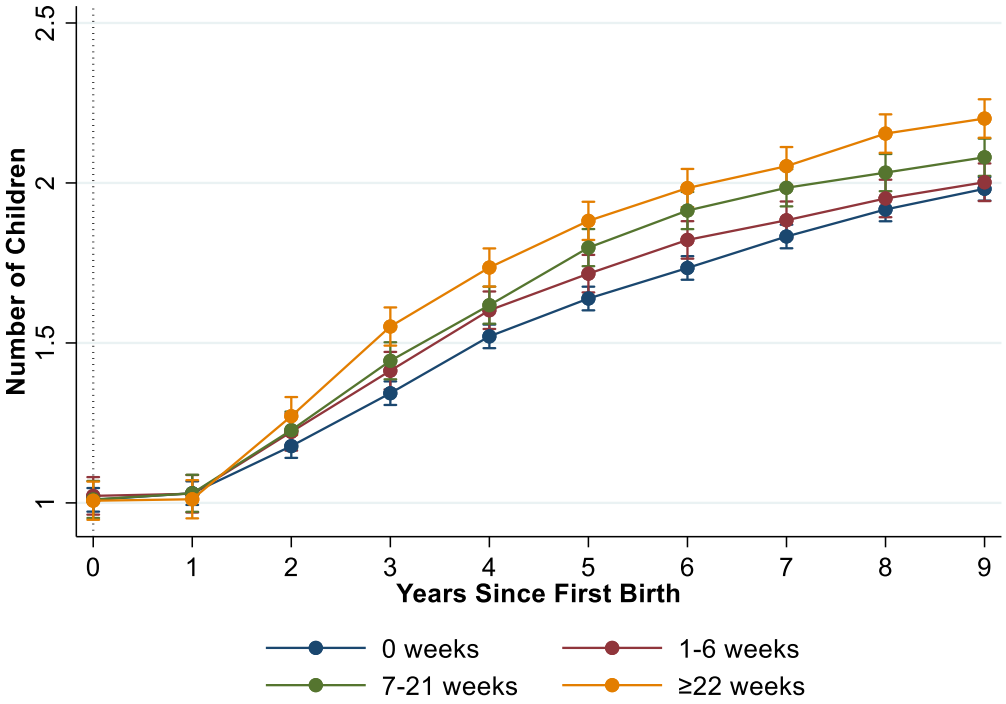
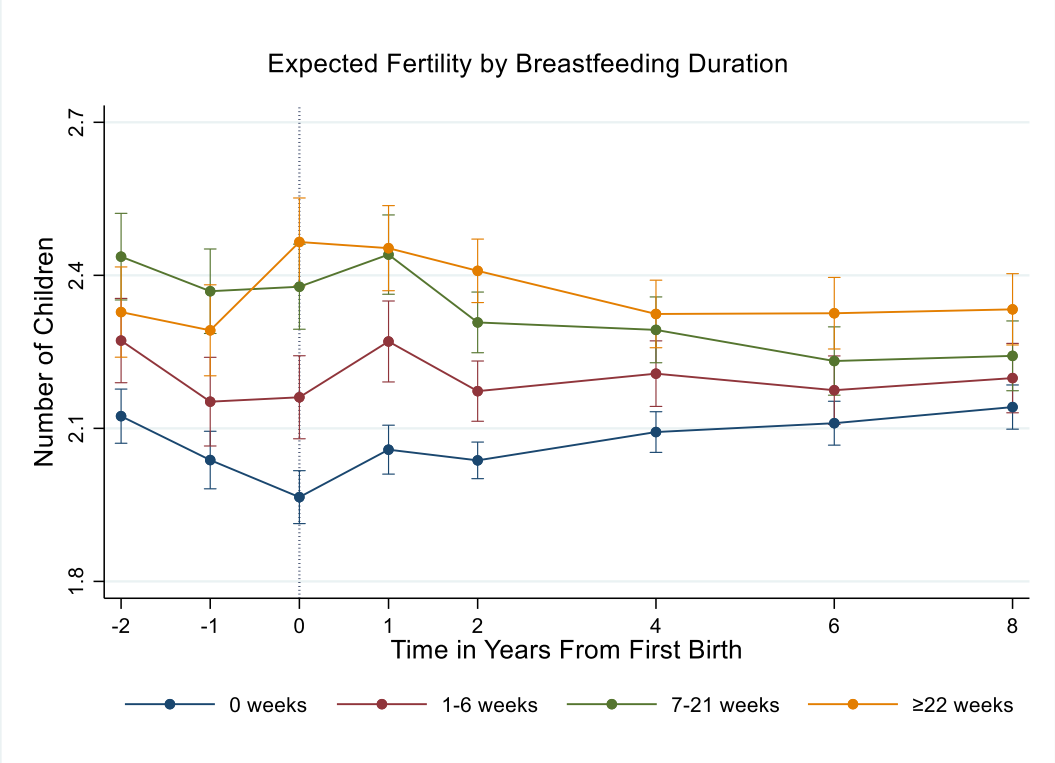


Figure two shows predicted probabilities from an event study model of the expectations across the life course by breastfeeding status. The point at zero represents the month in which the woman had her first birth. Two years before having their first birth, women who breastfeed do not differ in their fertility expectations. However, the long duration breastfeeding group is the only group whose fertility expectations go up in the year when they have their first child. This shift in fertility intentions happens precisely during that first year, and not at any other time. The change is both discrete and unique. No other group has an increase in expected fertility in the year they have their first birth.

Figure 2. Predicted Values of Expected Number of Children across the Life Course



Women who breastfeed for longer are very highly educated and have, on average, the oldest ages at first birth. They are firmly attached to the labor force before the start of childbearing. So we might think that they would be precisely the ones who would fall short of their expected fertility given their experiences with a time-intensive task such as breastfeeding. Breastfeeding duration, however, is a proxy that allows us to identify a group of highly educated women who realize that they prefer more intensive childrearing and so they both have more kids and invest more time in those kids. This dynamic change over the life course is an example of how people update and adjust as they go, in this case systematically linked to a central touchstone of intensive parenting.

References

Bachrach, C., & Morgan, P. (2013). A cognitive–social model of fertility intentions. *Population and Development Review*, *39*(3), 459-485.

Hayford, S. (2009). The evolution of fertility expectations over the life course. *Demography*, *46*(4), 765-783.

Iacovou, M., & Tavares, L. P. (2011). Yearning, learning, and conceding: reasons men and women change their childbearing intentions. *Population and Development Review, 37*(1), 89-123.

Maralani, Vida and Samuel Stabler. 2018. "Intensive Parenting: Fertility and Breastfeeding Duration in the United States." *Demography* https://doi.org/10.1007/s13524-018-0710-7

Morgan, P., & Rackin, H. (2010). The correspondence between fertility intentions and behavior in the United States. *Population and Development Review, 36*(1), 91.