

Unrealized Fertility in Latin America

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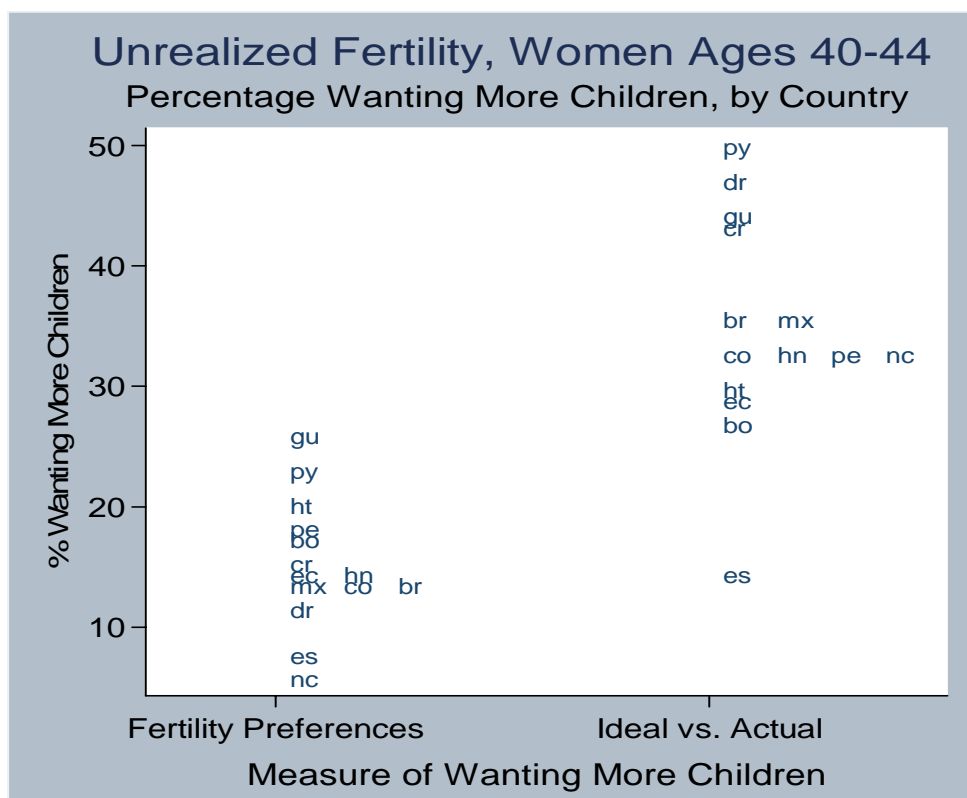
Rationale

In recent years much research effort has been invested in the estimation of wanted fertility (fulfilled fertility) and unwanted fertility (excess fertility). The latter has been the focus of a large body of research in mid- and high-fertility societies (in Asia, Africa, and Latin America) because of the public policy implications of unwanted fertility. In these regions virtually no attention has been given to unrealized fertility desires (unfulfilled fertility). This is in contrast to the substantial effort in European and North American demography to examine unrealized fertility desires (and their effects) as related to infertility and childlessness as well as trends in postponing childbearing and late fertility (childbearing after age 40) (White & McQuillan 2006; McQuillan et al. 2003; Billari et al. 2007; Sobotka 2004).

With large fractions of Latin American women postponing first births beyond age 25 and even beyond age 30 (Rosero-Bixby, Castro-Martín & Garcia 2009), the fraction of women attempting to achieve desired childbearing at older ages is likely to increase in the near future. And late fertility clearly brings with it the risk of falling short of childbearing targets: between 35 and 66 percent of women ages 45-49 in Latin American countries report secondary infecundity (Rutstein & Shah 2004), and new estimates indicate that half of all women are infecund by age 45 (Leridon 2008). As is already the case in Europe (Spéder & Kapitány 2009; Sobotka 2004), postponed childbearing lowers lifetime fertility and may prevent women from achieving their desired fertility.

This research focuses on the end of the reproductive career and investigates the extent to which women's careers end with childbearing goals having been realized or not. While there is existing research on infertility and childlessness (Rutstein & Shah 2004), we are unaware of any empirical research on Latin American (or other developing countries, for that matter) that has rigorously examined the phenomenon of unrealized fertility, i.e. falling short of desired fertility. This phenomenon (like unwanted fertility) joins together reproductive aspirations and experience. It must necessarily take into account fertility ideals and preferences, and this adds complexity to the analysis.

A significant proportion of Latin American women still desire another child near the end of their reproductive careers (see graph below, which presents estimates using two different criteria for identifying women who want another child). As a first effort to examine this phenomenon systematically, this will be a descriptive analysis. Ascertaining the dimensions of the phenomenon must be the starting-point.



In this paper, we will address the following questions:

1. How is unrealized fertility to be conceptualized and measured?
2. Have the levels of unrealized fertility in Latin American countries changed over time (late 1970s to late 2000s)?
3. What is the association between unrealized fertility and the reproductive career?
 - 3a. Is age at first birth later for women who end their careers short of their desired fertility? How much of the change over time in unrealized fertility can be attributed to change in age at first birth?
 - 3b. Are birth-spacing patterns distinctive for women who have unrealized fertility?
4. Is there an association between levels and trends in unrealized and unwanted fertility? That is, is there a tendency for societies to be high in both unsuccessful reproductive outcomes, or is there an offsetting at the aggregate level?

Data and Methodology

We will analyze data collected in Latin American under multiple survey programs: World Fertility Survey [WFS]; Demographic and Health Surveys [DHS]; Reproductive Health Surveys [RHS]. We will also analyze survey data collected outside of these programs in Brazil and Mexico. And we hope to

locate suitable data, possibly sub-national, for Argentina, Chile and Uruguay. In total, we anticipate utilizing data for at least 20 Latin American countries.

Conceptualizing and estimating unrealized fertility is the first objective of this research. There are two fundamental challenges. First, how to determine women's desired fertility, against which her reproductive experience will be compared? The paper will contain a discussion of the concept of unrealized fertility, drawing on a review of the research literature. As a practical matter, we will devise alternative measures of unrealized fertility based on responses to two items that are standard in the surveys:

- (1) "Would you like to have (a/another) child, or would you prefer not to have any (more) children?"
- and
- (2) "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?"

The second challenge is the truncation of reproductive careers in cross-sectional surveys of women of reproductive age. This research will focus on women ages 40 and older. But among these women there will be some further childbearing, albeit at low rates (especially for women ages 45 and older). We plan on calculating estimates of unrealized fertility for alternative age-groups (e.g. 40-49, 40-44, 45-49, 43-47, etc.), applying adjustments for expected further fertility. The adjustment procedure will draw on the survey data on age-specific fertility rates and the well-developed literature on age-patterns of infecundity (see review in Leridon 2008; Larsen & Ruggers 2001; Larsen & Menken 1989). Another challenge is coping with the possibility of associations between late fertility (and the onset of sterility) and the desire to have additional children.

Our second objective is to examine levels and historical trends in unrealized fertility at the macro level. We will calculate unrealized fertility using the alternative measures shown above (based on fertility preferences and the ideal number of children). Our data extend from the late 1970s to late 2000s, enabling us to examine trends during a good part of the ongoing demographic transition in Latin America.

Further, we will examine the relation between unrealized fertility and the end of the reproductive career through effects of birth timing and spacing. First, we will determine whether age at first birth is indeed a risk factor for unrealized fertility. And, assuming change in levels of unrealized fertility over time, we will calculate the impact of increasing ages at first birth on unrealized fertility. Using birth histories, we will also compare birth-spacing intervals between women who do and do not have unrealized fertility desires near the conclusion of their reproductive careers.

To address our final research objective, we will compare national aggregate levels of unrealized fertility with estimates of unwanted fertility generated from the Casterline-El-Zeini estimator of unwanted fertility (Casterline & El-Zeini 2007). We suspect that countries with high unwanted fertility rates may also have high levels of unrealized fertility, indicating a lack of reproductive control with few women satisfied with the outcomes of their reproductive careers.

While unrealized fertility is already a recognized phenomenon, it has been given relatively little attention. The goal of this research is to introduce analysis of unrealized fertility into the demographic literature on regions outside the West and to provide a first quantification of its magnitude (at the present and in the recent past).

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