Mother-in-law co-residence and fertility in Egypt

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Abstract (150 words max)

Evidence from Pakistan, Bangladesh, and Algeria has supported the hypothesis that mothers in law have a pronatalist influence; however, due to the increase in chronic disability among older adults as well as growing trends in circular migration patterns among men seeking work in urban centers, co-residing in-laws may actually mitigate the effect of the extended family on both desired family size and fertility. In this study we aim to establish whether a co-residing mother-in law alters fertility and the length of closed birth intervals. Using the 2006 Egyptian and Labor Market Survey (ELMS) and the 2008 Egyptian Demographic and Health Survey (EDHS), this study compares the parity progression of women with and without co-resident mother in laws. A Cox proportional hazards model is used to identify the effect of mother-in-law coresidence on parity progression.

Introduction

Evidence from Pakistan, Bangladesh, and Algeria has supported the hypothesis that mothers in law have a pronatalist influence; however, due to the increase in chronic disability among older adults as well as growing trends in circular migration patterns among men seeking work in urban centers, co-residing in-laws may actually mitigate the effect of the extended family on both desired family size and fertility. In this study we aim to establish whether a co-residing mother-in law alters fertility and the length of closed birth intervals. Using the 2006 Egyptian and Labor Market Survey (ELMS) and the 2008 Egyptian Demographic and Health Survey (EDHS), this study compares the parity progression of reproductive-age women with and without co-resident mother-in-laws. We use Cox regression to model the hazard of progressing to a second birth for women of parity 1 (ELMS) and the hazard of progressing to parity n among women parity n-1 for n>=2 (EDHS). The independent variables examined include co-residence with a mother-in-law, age, sex of the first child, as well as additional socioeconomic and household characteristics. We focus on the effect of mother-in-law coresidence on parity progression.

Background

In determining desired family size a practical consideration for any family is a consideration of how many surviving children they can take care of. Raising children requires both money and childcare time. Gendered division of labor in Egypt implies that the childcare time is supplied by women—mothers and female kin. Birth spacing can help women make the time burden of raising children more manageable and this can improve the well-being of every member of the family, but most notably the mother. In addition to child care a woman would have duties caring for any disabled adults.

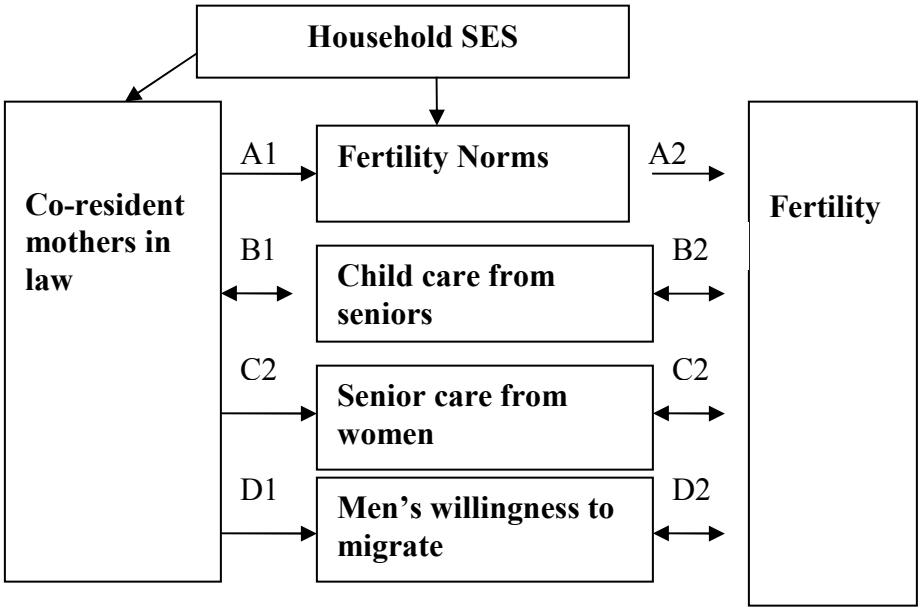
How much time a woman spends caring for others depends on who she lives with and her fertility. Demographers originally theorized that living in an extended family would increase fertility [3] because the superfluity of adult relatives would help a mother care for infants and small children. Evidence from Pakistan, Bangladesh, and Algeria has supported the hypothesis that mothers in law have a pronatalist influence [4]. New demographic developments have added complexity 1) There is more chronic disability among adults as older generations live longer; 2) Extended families facilitate husbands' circular migration to urban centers for work. Both the dependency burden of seniors and the extended absences of husbands may mitigate the effect of the extended family on both desired family size and fertility.

The foregoing considerations have led us to design a study that focuses on measuring how various household structures affect the allocation of caregivers' time. We believe that understanding the supply and demands on caregiver time can help us understand desired family size, the demand for family planning, and fertility.

Conceptual Framework

The figure below outlines our conceptual framework for the paper. Co-resident mothers in law are hypothesized to have influences on A) Fertility norms, B) Caregiving from seniors, C) Caregiving to seniors. D) Men's migration.

Older strains of the demography literature posit that the presence of older kin in the household will increase fertility by subsidizing the burden of childcare [5, 6]. Davis's (1958) theory about unidirectional effects of co-resident seniors on fertility may require modification in modern societies where co-residence also implies an extended duration of



demands for care from younger women and the role of the extended family in enabling fathers to migrate.

Methods

This study uses 2 data sources: the 2008 Egyptian DHS (EDHS) and the 2006 Egyptian Labor Market Survey (ELMS). The EDHS is a nationally representative sample of N=16,957 households with 15,573 women age 15-45 collected by Zanaty & Associates. The ELMS is a nationally representative sample of 5,000 households surveyed in 2006. Two selection criteria are employed to arrive at a sample for analysis of the EDHS: women are of reproductive age (15-49); women have reached parity equal to or greater than 1. The dependent variable employed for the EDHS is the duration in months of the most recent birth interval. For women who have reached parity n at the time of the survey, the dependent variable captures the time that has elapsed between births n-1 and n. For ELMS, we restrict the sample to women of parity 1 & 2 and the dependent variable is time between first and second birth. The key independent variable explored in this analysis is co-residence with a mother-in-law. Other independent variables include age, urban or rural residence, socioeconomic status as well as the time invested in household labor by both the woman of interest as well as her co-residing mother-in-law. Sample sizes for analysis are 11767 and 3617 for EDHS and ELMS, respectively. A cox-proportional hazards model is used to estimate the effect of co-residing mothers-in-law on women's parity progression. Women who have only had one birth are right censored at time of survey. Future analysis will expand the scope of the ELMS analysis to include an investigation of the influence of co-residence on progression within the most recent birth interval. New variables will be incorporated such as time spent by seniors and younger women in household duties as well as whereabouts of husbands during prior 12 months.

Preliminary Results

Preliminary findings suggest that the presence of a co-residing mother-in-law has a pronatalist effect on women, even after controlling for other confounding variables (Tables 1 & 2). These results are consistent across the two surveys, EDHS and ELMS. Women who live in rural areas also demonstrate a decreased time to 2nd birth as compared to women in urban households. Additionally, women for whom first child was a son were slower to move from 1st to 2nd birth than women for whom first child was a daughter.

Table 1. Hazard ratio of 2nd Birth

n=3617			
	Model 1	**Model 2**	**Model 3**
	Hazard ratio	Hazard ratio	Hazard ratio
Co-residing mother-in-law	1.17*	1.13*	1.14*
Age		0.99**	0.99*
Sex of first child			
Daughter		1.00	1.00
Son		0.89***	0.88***
Education			
Has never been to school		1.00	1.00
Has been to school		0.89**	0.86*
Is currently in school		0.36*	0.35*
Place of residence			
Urban			1.00
Rural			1.16***
Proportion of household that has been to school			1.25
Household income			1.00
Significant at *p<=0.05; **p<=0.01; ***p<=0.001			

Table 2. Hazard ratio of *most recent* birth

	Model 1	**Model 2**	**Model 3**
	Hazard ratio	Hazard ratio	Hazard ratio
Co-residing mother-in-law	1.14***	1.13***	1.09**
Age		0.99	0.99
Sex of second to most recent child		1.04*	1.04*
Education			0.97**
Place of residence			
Urban			1.00
Rural			1.02
Household income			0.96***
Significant at *p<=0.05; **p<=0.01; p<=0.001			

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