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DO YOUNGER WIVES INCREASE MALE FERTILITY? EVIDENCE FROM THE HISTORICAL POPULATION OF THE ST. LAWRENCE VALLEY

Extended Abstract

BACKGROUND

Imbalanced numbers of men and women in populations (i.e. sex ratios) are a demographic feature of many populations. The early population of the St. Lawrence valley constitutes an example of extreme male abundance. During the 17th and early 18th century, men outnumbered women by a factor of up to 15 men per marriageable woman, followed by a steady decline until proportions of men and women reached unity at around 1740 (Filser and Willführ, 2018 ; Landry, 1992, p. 199). Our previous analysis revealed that male biased sex ratios were associated with female, but not male ages at marriage. Table 1 summarizes ages at first marriage: In the first half of the 1680s, brides were around five years younger at marriage (17.3) than in the latter half of the 1740s (22.8). However, male ages at first marriage only increased from 25.3 to 26.5 years over the observation period (1680 – 1750) (Filser and Willführ, 2018 - paper forthcoming). Median ages at first marriage shown in the right column of table 1 underscore this finding.

Table 1: Ages at first marriage

Sex	*Period*	*Mean*	*Median*
Female	1680-85	17.3	16.8
	1745-49	22.7	21.8
Male	1680-85	25.3	25.0
	1745-49	26.5	25.7

Source: prdh database, own calculations

Consequently, female lifespan spent in marriage before menopause decreased as brides got older over time. Given that fertility was limited to marriage, women entered their reproductive lifespan on average around five years earlier at the beginning of the study period. In monogamous societies, this has also

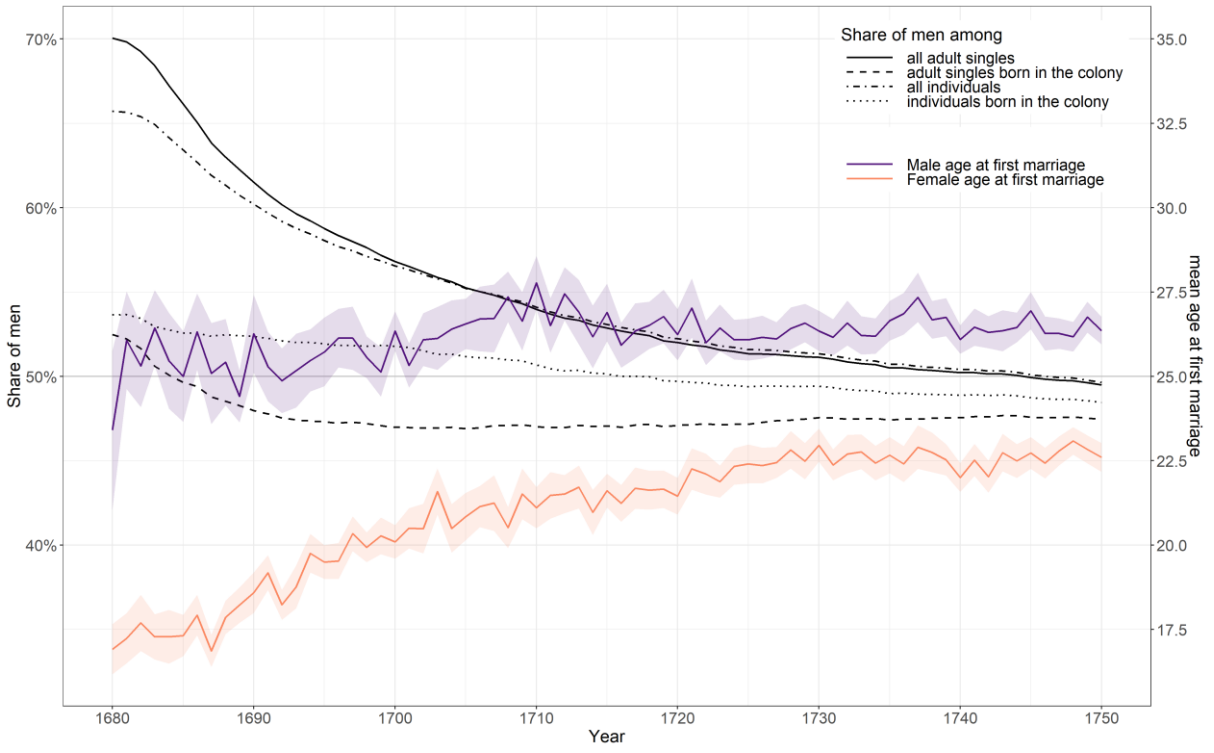
implications for male fertility, because it is co-determined by the reproductive lifespan of the respective wives. Consequently, reproductive lifespans of husbands were around five years longer when brides were aged around 17 as opposed to 22. In view of the natural fertility in the St Lawrence population, we expect male fertility to decrease as wives get older at marriage. Specifically, the difference in reproductive time might be around 2-3 births per husband. In this analysis, we address unstudied questions of male fertility variance in a changing sex ratio and partner market environment.

DATA & METHODS

We use the Population Register of Historic Quebec ("Registre de la population du Québec ancien", RPQA) data created by the Programme de Recherche en Démographie Historique at the University of Montreal (Dillon et al. 2017). We limit the data to the period between 1670 and 1756, which is shortly before the end of the organized female immigration program ("filles du roi") to the outbreak of the French-Indian war. As outlined above, this period coincides with a drop in the population's sex ratio and an increase in female ages at first birth (Figure 1).

We fit Poisson regression models to analyze the number of children per married man. Moreover, we use multiple failure Cox regressions to model the timing of births over the life course of married men in the study population.

Figure 1: Colony's male population share and mean age at first marriage by sex



PRELIMINARY RESULTS

Our results indicate that male fertility does not change as female ages at marriage increase. Instead, the number of children per married man remains stable over the study period.

Preventing maternal mortality as well as fertility enhancement via kin networks could explain our findings. Kin networks were emergent during the early days of the colony. Early settlers necessarily had neither parents nor grandparents present. Kin networks influence fertility outcomes by preventing maternal mortality (Willführ, Johow and Voland, 2018). In other words, even though potential reproductive lifespans were shorter when women married later, this could have been counterbalanced by kin networks. Even though women married earlier, their mortality might have been higher because support from parents and grandparents was absent. In later years, women married later in life but their reduced reproductive lifespan was compensated by reduced mortality through the assistance of the extended family. A further potential explaining factor is that kinship networks also facilitated narrower birth intervals. Consequently, even though the total reproductive lifespan is shorter when women were older at their weddings, the number of births remained high as birth intervals were narrower and kinship networks helped or even incentivized to sustain such a pattern.

Future analysis will investigate both possibilities by including kinship composition and proximity in our models.

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