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Fertility Decline in Canada Since the Great Recession

What this research is about

The global financial crisis of the Great Recession (2007–2009) had profound economic and social consequences. One of its many social impacts was on childbearing, resulting in a decline in fertility rates.

Economic hardship can influence fertility in two ways: postponing childbirth (tempo effect) and having fewer children (quantum effect). These effects may be concentrated within particular age groups, and may influence parities (i.e., how many times a person becomes pregnant and carries to term).

In Canada, total fertility rate declined sharply, from 1.69 children per birthing person at the start of the Great Recession to 1.33 in 2022, the lowest ever birth rate in Canada. However, the reasons behind this decline remain unknown. This study aimed to comprehensively analyze this recent fertility decline, examine tempo and quantum effects, and explore how age and parity might contribute to the decline.

What the researchers did

The researchers collected data on total fertility rates from the Human Fertility Database (1921–2019) and Statistics Canada (2020–2022). The total fertility rate is the sum of age-specific fertility rates in a given period, representing the average number of children a person may have. However, this rate may be distorted by tempo effect. To account for this, the researchers also examined age-specific fertility rates, using data from Statistics Canada (2008–2022).

To further account for tempo effect, the researchers examined tempo-adjusted total fertility rates, using data from the Human Fertility Database (2008–2018). This adjustment assumes everyone who gives birth does so at the same age, and only once. The researchers also collected data on the average age at first birth from the Human Fertility Database (2008–2019), another indicator of birth postponement.

What you need to know

This study addressed the factors behind fertility decline in Canada from 2008 to 2022 using data from Statistics Canada and the Human Fertility Database. The researchers examined factors such as delayed childbirth (tempo effect), fewer children per birthing person (quantum effect), age, and parity (i.e., how many times a person becomes pregnant and carries to term). They found that decreasing quantum accounted for 61% of fertility decline, while tempo accounted for 39%. Additionally, declining first births in women aged 18–28 were the main driver behind the drop in fertility. The researchers conclude that there is little sign that fertility will increase in the future to offset this decline.

The researchers further examined the average number of births in a birth cohort by age 40, using data from the Human Fertility Database (from cohorts 1968–1979, i.e., people aged 40 in 2008–2019).

Using this data, the researchers calculated several additional values. To account for tempo effect in relation to parity, as well as to reflect quantum effect, they calculated tempo- and parity-adjusted total fertility rates using data from the Human Fertility Database (2008–2018). The researchers also calculated tempo and quantum effects on fertility decline from 2008 to 2018. They calculated the contribution of various age groups and parities of people who gave birth to the fertility decline from 2008 to 2020.

What the researchers found

The researchers found that the total fertility rate declined significantly after the Great Recession, from

1.69 children per birthing person in 2008 to 1.33 in 2022, the lowest ever birth rate in Canada.

Birth postponement also increased significantly after the Great Recession. The average age at first birth increased from 28.1 years old in 2008 to 29.7 years old in 2019. The average age at second birth increased from 30.7 years old in 2008 to 31.8 years old in 2019. Fertility rates for women under 30 decreased, while there was a slight increase among women aged 35–39.

The tempo- and parity-adjusted total fertility rates were higher than the observed total fertility rate. This suggests that declining fertility is partially linked to delayed childbirths and changing parity composition (i.e., changes to the proportion of different parity groups in the population). Additionally, the tempo- and parity-adjusted total fertility rate was consistently lower than the tempo-adjusted total fertility rate from 2008 to 2018. This implies that changes in parity are partially linked to delayed childbirths, and that these changes have remained stable after the Great Recession. The quantum effect explains 61% of declining fertility, whereas the tempo effect explains 39%.

As well, declines in first births were 122% responsible for total fertility decline from 2008 to 2019. It was over 100% because this decline was slightly offset by increases in second-order (-7%), third-order (-9%), and higher-order births (-6%) during this period. Women under 35, particularly women aged 18–28, experienced the most significant drop in first births. First birth rates increased slightly in women aged 37–49, and fertility rates for women over 36 were higher when all parities were considered. However, this increased fertility in older ages was too small to offset declining fertility in younger ages.

How you can use this research

This research can inform researchers, policymakers, and public services and support networks focussed on family planning, fertility, pregnancy, and child care. The researchers note that delays in childbirth will likely continue, and that any increases in fertility will happen at older ages. They also suggest further investigation into other important factors affecting fertility, such as the economy, social policy, and changing values towards family and parenthood.

About the researchers

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