

# How Much Time Is Left? Trends in Parental Lifespan across Europe.

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## Abstract

Over the course of the second half of the 20<sup>th</sup> century, European societies have experienced societal transformations linked to partnership instability, union dissolution, as well as lower and later fertility. The corresponding increases in the mean age at first birth would have led to a reduction in the number of years parents have left to spend with their (first born) children. Yet life expectancy has also increased markedly, leading again to an increase in “parental lifespan”. While life expectancy has generally increased for all population subgroups and there is evidence that life expectancy is generally higher among parents, not all of those additional life years can be expected to be healthy life years. In this article, we want to look at how parental lifespan has evolved across Europe over time, considering progress in educational attainment that has been largely responsible for the observed changes in family formation patterns, as well as differences in healthy life expectancy that have implications for the support capabilities of elderly parents towards their offspring. After describing trends in life expectancy, healthy life expectancy and mean age at first birth for women across European countries, we estimate parental lifespan by education, using the most recent harmonized data from Eurostat and the Integrated European Population Microdata database. In general, those population subgroups that delay first births the most while having the smallest health expectancy, capable parental lifespan will be the shortest, with negative implications for the wellbeing of both younger and older generations.

## Background

As a consequence of the societal transformations that have been broadly summarized under the label of “Second Demographic Transition” (Lesthaeghe 2014), European societies have seen declines in partnership stability, increasing rates of union dissolution, as well as lower and later fertility (Sobotka 2018). The corresponding increase in the mean age at first birth would certainly lead to a reduction in the number of years parents have left to spend with their children under a period life table perspective. Yet in parallel to these developments, European societies have also experienced strong increases in life expectancy that would again increase the shared lifetime of parents and their children. The extent to which these two developments cancel each other out has not been thoroughly studied in the European context. Therefore, in this article, we want to look at how “parental lifespan”, that is the time people can expect to live as parents, has changed across Europe over time.

Fertility postponement has certainly also not been happening at an equal pace across different subgroups of European societies. Research has shown that increases in the mean age at first birth are very much driven by increases in educational attainment and that depending on when attainment started to increase markedly, fertility postponement started sooner or later (Ní Bhrolcháin and Beaujouan 2012; Neels et al. 2017). As Murphy et al. (2006) have pointed out, older parents are going to be in poorer health at

any age of their children. Yet the strategy of investing more of one’s lifetime into education might pay off, given that better educated and therefore older parents will also dispose of more resources to support their children (Bray, Gunnell, and Smith 2006; Mikko Myrskylä and Fenelon 2012).

Figure 1: Mean age of women at birth of first child  
Source: Eurostat



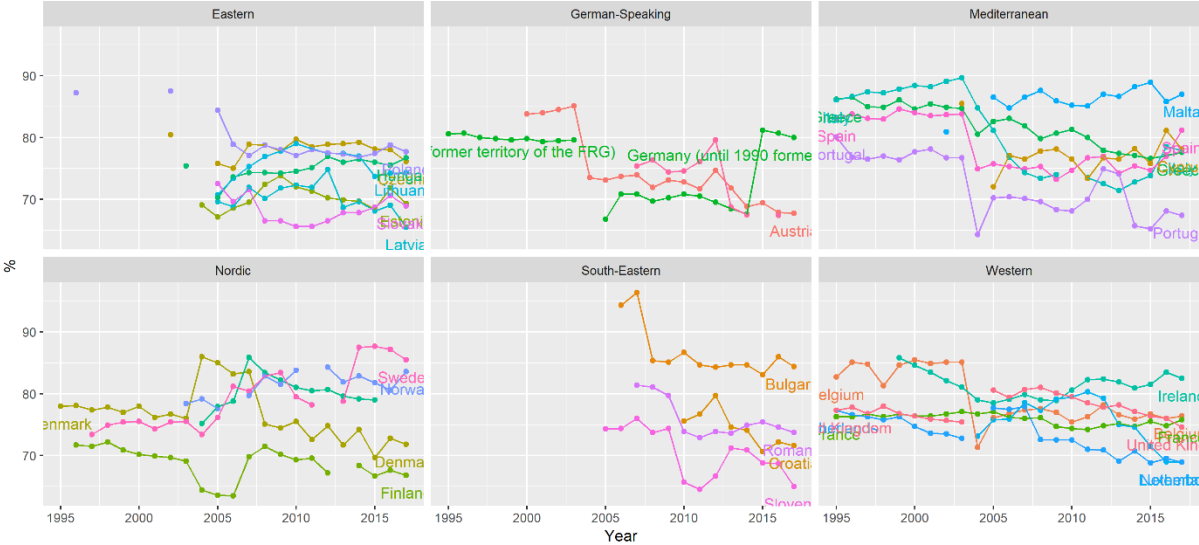
Figure 1 shows mean age at first birth for women across the countries for which data is available from Eurostat. Longer time series can be harmonized from the *Human Fertility Collection*<sup>1</sup> and will be used eventually in the study. Given how high mean age at first birth has become for large fractions of the population in some countries, the question of how much of one’s remaining lifetime one can expect to share with one’s offspring – considering also the possibility of frailty and decreasing support capacities in old age – might increasingly become relevant for the decision about whether to have offspring in the first place. Several studies have shown the importance of parents for their children’s success way into adulthood, particularly in response to shrinking kinship network sizes (Hamilton 2016; Sohn 2019). Parents contribute to their children’s development with their time, effort, as well as their financial resources. Even when the children are no longer living in the same household, parents make important financial contributions to their children’s households. Beyond that, provided that they live long enough and enjoy good health, parents can play an important role in supporting their children with raising their own children (Leopold and Skopek 2015; Margolis 2016; Song and Mare 2019). As a consequence of steadily increasing labor force participation among prime working-age women, the population of “custodial grandparents” has steadily been growing as well (Kropf and Burnette 2003), raising the importance of grandparental health even further. Increased risk of union dissolution among parents, also

<sup>1</sup> <https://www.fertilitydata.org/cgi-bin/index.php>

adds to the importance of grandparents in their children’s and grandchildren’s lives (Dunning 2006; Glaser et al. 2010).

In sum, parental (and potentially grandparental) support has notable positive effects for the children generation. Recently, studies have shown that postponement of motherhood to later ages does not necessarily lead to negative consequences in terms of health and socio-economic outcomes for the offspring (Barclay and Myrskylä 2016; M. Myrskylä, Barclay, and Goisis 2017). One main reason for this is that older parents tend to be mostly higher educated, better-off and of better general health, which affects their capacity to support their children and grandchildren. While life expectancy has generally increased for all population subgroups and there is evidence that life expectancy is generally higher among parents (Barclay and Kolk 2019), not all of those additional life years people can expect to live are going to be healthy life years (Murray et al. 2015). Figure 2 reports trends in healthy life years at birth in percentage of the total life expectancy for women across Europe. While up to almost 90 % of all years lived in Malta are years spend in good health, the corresponding proportion in Finland lies below 70 %.

Figure 2. Healthy life years at birth in percentage of the total life expectancy - females  
Source: Eurostat



Parents’ health and longevity may actually improve thanks to the investments done in their children (Friedman and Mare 2014; Sabater, Graham, and Marshall 2019). A shorter parental lifespan implies less time to benefit from the positive effects of earlier investments in children. People with higher levels of educational attainment tend to delay childbearing for longer which puts them at greater risk of not having much time left to share with their offspring. Yet better educated individuals can also expect to live longer and in many societies, the increases in life expectancy seen in recent decades have

disproportionately benefited people with better education (Olshansky et al. 2012; Spittel, Riley, and Kaplan 2014; Jasilionis and Shkolnikov 2016; Permanyer et al. 2018).

Figure 3. Parental Life Expectancy at First Birth  
Source: Eurostat



After describing trends in life expectancy, healthy life expectancy and mean age at first birth for women across European countries, we estimate the parental lifespan and describe its variation by educational subgroups. Figure 3 shows parental life expectancy at first birth in Europe. It ranges between 50 and 58 years, with France and Iceland showing highest levels of parental life expectancy. For several Western and Nordic European countries, parental lifespan seems steadily increasing over time, while this is not the case for many Eastern, South-Eastern and Mediterranean countries. For the Eastern and South-Eastern countries this is most likely due to delays in gaining life years. For the Mediterranean countries, instead, where life expectancy tends to be high, a lower parental lifespan maybe due to a more severe postponement in first births (see Figure 4).

Figure 4. Mean Age and Life Expectancy at First Birth  
Sorted by Life Expectancy at First Birth in 2015, Source: Eurostat



In general, in countries where first births are delayed the most and healthy life expectancy is the smallest, parental lifespan will be the shortest, with negative implications for the wellbeing of both younger and older generations. Expectedly, in countries where low educated individuals are more disadvantaged in terms of life expectancy, their parental lifespan will be shorter relative to their highly educated counterparts. Despite postponement in first births, we expect an overall increase in the parental lifespan of the highly educated, which would be mostly driven by gains in life expectancy over time.

### Data and Methods

First, we aim to describe variation in parental lifespan over time and across countries. Parental lifespan is calculated as life expectancy at mean age at first birth (see Figure 3). Currently, data on life expectancy, healthy life expectancy and mean age at first birth come from EUROSTAT database. To raise the number of countries and to obtain longer time trends, eventually we intend to use data from *Human Mortality Database* and *Human Fertility Collection*.

Next, we aim to explore variation in the parental lifespan by educational subgroups and sex. To this aim, we will use period life tables by educational level provided by EUROSTAT. Period mean age at first

birth by educational attainment will be calculated by means of currently available, harmonized census data derived from the *Integrated European Population Microdata (IEPM)* database (<http://www.iepm-project.org>). Unfortunately, due to the lack of data, time trends will be shorter and geographic coverage less ample in scope when exploring variation in parental lifespan across educational subgroups.

Finally, we will be able to decompose parental lifespan in its two components, as shown in Figure 4, to examine whether trends in first births postponement or gains in healthy life expectancy have been contributing to the variation observed across educational levels and countries the most.

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