Abstract

The common, almost instinctive, response to the question on whether parents' and children's longevity are correlated is something akin to "of course". But when we further ask about the strength of this relationship, responses vary and there is no clear agreement on how important this relationship is nor on what exactly it means. Attempts to quantify it were marred by severe statistical problems such as the use of small and non-representative samples. We use a sample of over half a million individuals in Israel to quantify the relationship between the longevity of fathers and their children. It is the first study to empirically address the correlation in longevity across generations using a large and representative data set. When a father dies between 45 and 65 years of age, his age at death has no effect on his sons' longevity. However, when he dies between 65 and 85 years of age, an additional year of life is associated with almost 2 additional months of life for his sons. Death after 85 years of age has an even stronger effect reaching over 3 additional months for sons and daughters alike. For daughters, there is no effect when a father dies between the ages 45 and 85. These correlations are a result of hereditary factors as well as socio-economic conditions. As explained in the paper, our findings set an upper bound to the hereditary effect.