

The Association between Height and Birth Order: Evidence from 652,518 Swedish Men

Mikko Myrskylä, Max Planck Institute for Demographic Research

Karri Silventoinen, University of Helsinki

Aline Jelenkovic, University of Helsinki

Per Tynelius, Karolinska Institutet

Finn Rasmussen, Karolinska Institutet

Abstract. With decreasing fertility, the average birth order is also decreasing. Birth order has been associated with important child outcomes such as cognitive ability and cancer risk, but little is known about the association with height. We studied the birth order-height association among 652,518 men born in 1951-1983 using fixed effects models that account for unobserved fixed parental factors. Birth orders 2 and 3 were associated with 0.4 and 0.7cm ($p < .001$) shorter height than birth order 1. The height difference between birth orders 3 and 1 is larger than the population-level height increase achieved over 10 years. The associations were similar in high- and low-SES families, but attenuated in more recent cohorts. Birth weight or -length did not explain these associations. The attenuation of the effect over cohorts may reflect improvements in living standards and better control of infectious diseases. Decreases in family size may partially explain the secular height increases.