

Children of youngest and oldest mothers at increased risk of developmental vulnerabilities

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Children born to the youngest mothers have the highest risk of developmental vulnerabilities at age 5, largely due to social and economic disadvantage, according to research on almost 100,000 children published this week in *PLOS Medicine* by Kathleen Falster of the University of New South Wales, Sydney, Australia, and colleagues. While the risk of developmental vulnerabilities steadily declined with every additional year of a mother's age up to 30 years, there was a slight increase in risk for children born to mothers aged 35 years and older, similar to the risk in children born to mothers in their early twenties.

In recent decades, there has been a shift to later childbearing in high-income countries and there is limited large-scale evidence on the relationship between maternal age and [developmental outcomes](#) beyond infancy. In the new study, researchers used perinatal, hospital and birth registration records, as well as the Australian Early Development Census (AEDC) and school enrollments, to follow a cohort of 99,530 [children](#) from birth until their first year of school in 2009 or 2012.

4,382 (4.4%) of the children were born to mothers aged less than 20 years and 20,026 (20.1%) children were born to mothers aged 35 years and older. Overall, 21% of all children were developmentally vulnerable on at least one developmental domain at age 5. That rate was highest, at 40%, in children born to mothers aged 15 years and younger, and steadily decreased until maternal age 30, hitting a low of 17% in children born to mothers aged 30 to 35 years. For children born to mothers aged 35 to 45 years, up to 24% were developmentally vulnerable on at least one domain at age 5. Socio-economic factors explained at least half the increased risk of vulnerability in children born to younger [mothers](#).

"To our knowledge, this study is the largest scale evidence internationally on the relationship between [maternal age](#) at childbirth—across the whole distribution of maternal ages—and early childhood development," the authors say. "Further research to better

understand the mechanisms that underlie the elevated risk of developmental vulnerability... may inform policies and interventions to promote positive child development across the population."

More information: Falster K, Hanly M, Banks E, Lynch J, Chambers G, Brownell M, et al. (2018) Maternal age and offspring developmental vulnerability at age five: A population-based cohort study of Australian children. *PLoS Med* 15(4): e1002558.

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