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Coronavirus

Fewer boys born amid covid-19

The initial stress of the pandemic may have skewed the birth sex ratio in England and Wales, possibly due to uncertainties causing pregnancy losses of male fetuses, finds Alice Klein

THERE were fewer male babies born in England and Wales in mid 2020 than expected, possibly because the stress of the covid-19 pandemic led to more pregnancy losses of male fetuses.

Outside of the pandemic, more male babies tend to be born than female ones. Between 2012 and 2020, 1054 boys were born for every 1000 girls each year on average in England and Wales. No one is sure why this happens. It may be because boys are more likely to die in infancy, so having more of them at the outset leads to a balanced sex ratio by the time babies reach reproductive age.

Several studies suggest there can be a sudden drop in the proportion of male births around three to five months after a stressful event that affects a whole population. This occurred in New York City after the September 11 attacks, in the UK after the death of Diana, Princess of Wales, and in Norway after the Breivik mass shooting.

To find out if covid-19 had a similar effect, Margaret Ryan at Trinity College Dublin in Ireland and her colleagues analysed birth records spanning 2012 to 2020 for England and Wales. In June 2020, the ratio of male to female babies born dipped suddenly, with only 1040 boys born for every 1000 girls. This was the lowest ratio of male to female babies of any June throughout the study period, with a statistical analysis suggesting this decline wasn’t a chance finding (medRxiv, doi.org/jfgp).

The initial stress of the pandemic may have skewed the birth sex ratio in England and Wales, possibly because the stress of the covid-19 pandemic caused a disproportional loss of male fetuses among pregnant people in their second trimester, which may have resulted in fewer male babies being born in June 2020, according to the team. Stressful events may activate non-conscious evolved mechanisms in pregnant people to spontaneously abort fetuses that have less chance of thriving in tough environments, says Tim Bruckner at the University of California, Irvine. Male fetuses are more likely to be frail than female ones, meaning “their mothers may be unconsciously gauging that it’s not the best environment to bring them into”, he says.

This may particularly occur during a pregnant person’s second trimester, assuming this is when they may unconsciously detect their fetus’s health, says Bruckner. By August 2020, the ratio of male to female births had returned to pre-pandemic levels in England and Wales, possibly because people were habituated to the pandemic and the acute stress had passed, he says.

Since the drop in male births in England and Wales was small and short-lived, it won’t “distort the demographic characteristics in ways the average resident there would notice”, says Ralph Catalano at the University of California, Berkeley.

Long covid

Vaccines could cut the risk of long covid by two-fifths

THE risk of long covid may be lower in people who catch the coronavirus after being vaccinated. Daniel Ayoubkhani at the UK’s Office for National Statistics (ONS) and his colleagues looked at a random sample of people, aged 19 to 69, who tested positive for the coronavirus between April 2020 and November 2021. The sample included 3090 people who had received a second dose of either the Pfizer/BioNTech, Moderna or Oxford/AstraZeneca coronavirus vaccine at least two weeks before they first tested positive.

These participants were paired up with a random sample of 3090 unvaccinated people, with the individuals being matched by their age, sex, socioeconomic status, any pre-existing health conditions and whether they were white or a different ethnicity. The sample size was too small to group the participants according to more specific individual ethnicities, says co-author Vahé Nafilyan. All the participants were part of the UK Covid-19 Infection Survey.

Long covid was defined as any symptom the participants self-reported 12 weeks after testing positive that they could only put down to the coronavirus. Of the unvaccinated participants, 14.6 per cent reported having at least one long covid symptom, compared with 9.5 per cent of those who were vaccinated. Vaccines were linked with a 41 per cent lower risk of long covid at 12 weeks post-infection (Open Forum Infectious Diseases, doi.org/jd6x). The longer-term risk wasn’t explored.

According to Ayoubkhani, a major limitation of the study is that most of the vaccinated participants were infected when the delta variant was dominant, whereas most of the unvaccinated people probably caught the alpha variant. “The question is now less about if vaccination reduces long-term symptoms, but why and how much, says Michael Edelstein at Bar Ilan University in Israel.”

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