

Lockdowns may have impeded pandemic babies' social communication skills

October 11 2022



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The enforced isolation imposed by the COVID-19 pandemic lockdowns may have impeded the social communication skills of babies born during these periods, suggests research published online in the *Archives of*



Disease in Childhood.

Fewer such milestones were met during the first year of life, the findings show. It's to be hoped that these delays will be reversed as "normal life" resumes. But it may be worth monitoring these children's development to school age to make sure there are no long-lasting effects, the researchers suggest.

The development of language in babies is complex, with younger babies fixating on the eyes of caregivers during interactions while older ones tend to shift their gaze from the eyes to the mouth, explain the researchers.

Before the advent of coronavirus vaccines, mass lockdowns and mask wearing were deployed to curb the spread of COVID-19 infection, limiting babies' interactions with people outside the home and potentially restricting their access to visual and facial cues for <u>language</u> <u>development</u>.

To gauge the potential impact these measures might have had, the researchers assessed 10 parentally reported developmental outcomes for 309 "pandemic" babies at 12 months of age.

The babies were part of the CORAL (Impact of CoronaVirus Pandemic on Allergic and Autoimmune Dysregulation in Infants Born During Lockdown) study, and had all been born during the first three months of the COVID-19 pandemic (March-May 2020) in Ireland.

The 10 <u>developmental outcomes</u> included the ability to: crawl; sidestep along furniture; stand alone; pick up tiny objects with thumb and index finger (pincer grip); stack bricks; finger feed; know their own name; express one definite and meaningful word; point at objects; and to wave "bye-bye."



These outcomes were compared a year after birth with those of 1629 infants from the BASELINE (Babies After SCOPE: Evaluating the Longitudinal Impact using Neurological and Nutritional Impact) study, which included babies born in Ireland between 2008 and 2011.

CORAL study babies were born slightly earlier, on average, than the BASELINE study babies, and there were significantly fewer first-born CORAL study babies: 45% (138) vs. 84% (1364). The proportion of mothers educated to or attending tertiary-level education (postgraduate certificate or higher) was also higher in the CORAL group: 94.5% (292) vs. 88% (1431).

Comparison of the outcomes showed that slightly fewer CORAL study infants had reached social communication developmental milestones, as reported by their parents than had BASELINE study infants.

More CORAL study infants were able to crawl (97.5% vs. 91%), but fewer expressed one definite and meaningful word (77% vs. just over 89%), could point (84% vs. 93%) and could wave "bye-bye" (88% vs. 94.5%).

After accounting for potentially influential factors, including the child's age when the questionnaire was completed, gestational age in weeks, birth order, and mother's educational attainment, differences in outcomes between the two groups were still evident.

CORAL study infants were less likely to have one definite and meaningful word by the age of 12 months, less likely to be able to point, and less likely to be able to wave goodbye.

They were still more likely to be crawling at the age of 12 months than their BASELINE study counterparts, however, which might be because they were more likely to have spent more time at home and on the



ground rather than out of the home in cars and strollers, suggest the researchers.

In a bid to explain the other findings, the researchers suggest that lockdown measures may have reduced the repertoire of language heard and the sight of unmasked faces speaking to them, while also curtailing opportunities to encounter new items of interest, which might prompt pointing, and the frequency of social contacts to enable them to learn to wave goodbye.

This is an observational study, and as such, no firm conclusions on cause can be drawn about cause and effect. The two groups weren't exactly the same and the findings relied on parental recall, acknowledge the researchers.

"While neurodevelopment is part genetically mediated, parental education and social exposure have a significant role to play. Teasing out the direct effect of early enrichment is extremely difficult," they add.

They conclude, "Pandemic-associated social isolation appears to have impacted on social communication skills in babies born during the pandemic compared with a historical cohort. Babies are resilient and inquisitive by nature, and it is very likely that with societal re-emergence and increase in social circles, their social communication skills will improve. However, this cohort and others will need to be followed up to school age to ensure that this is the case."

More information: Social communication skill attainment in babies born during the COVID-19 pandemic: a birth cohort study, *Archives of Disease in Childhood* (2022). DOI: 10.1136/archdischild-2021-323441



Provided by British Medical Journal

Citation: Lockdowns may have impeded pandemic babies' social communication skills (2022, October 11) retrieved 15 May 2024 from https://medicalxpress.com/news/2022-10-lockdowns-impeded-pandemic-babies-social.html

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