How COVID-19 Affects Child Language Development, Gross and Fine Motor Skills, Adaptive Development, and Social Skills

Yucheng LIU[a], Gao SHAN[a], Ying ZHANG[b], and Xunan HUANG[a,c] *

[a.]School of Foreign Languages, University of Electronic Science and Technology of China, Sichuan, China

[b.]Jinniu Maternity and Child Health Hospital of Chengdu, Sichuan, China

[c.]School of Life Science and Technology, Center for Information in BioMedicine, University of Electronic Science and Technology of China, Chengdu, China

Children experience substantial language, physical, adaptive, and social development in their early years of life, providing important opportunities for them to establish positive trajectories for future development. However, when the COVID-19 pandemic emerged, their normal development was disrupted due to mandatory lockdowns, social distancing, and other measures. It is still unclear how the pandemic impacts young children in different aspects.

To address this issue, this study examined the assessment results of 1800 children aged 6 to 36 months in five developmental domains: language development, gross and fine motor skills, adaptive development, and social skills, based on the Chinese version of Gesell Developmental Schedules. Among the children, 759 were born and tested before the COVID-19 outbreak, and 1041 were born after the outbreak. They were divided into five subgroups with 6-month intervals (6-12m, 12-18m, 18-24m, 24-30m, and 30-36m) to further observe how the pandemic affects young children of different age groups.

Linear mixed-effects models were used to explore the effects of COVID-19 (pre-COVID, and post-COVID) and age groups (6-12m, 12-18m, 18-24m, 24-30m, and 30-36m) on the results of the five development domains. The results showed that there was no significant main effect of COVID-19 in all five development domains. However, a significant interaction effect was found between COVID-19 and age groups in the language development domain. Post-hoc analysis showed that the results of language development were significantly higher in the post-COVID group than the pre-COVID group for children aged 18-24 months. No significant differences were found between the COVID conditions in other age groups. The results indicate that the pandemic may not pose a serious negative effect on children's development.