

Avon Longitudinal Study of Parents and Children (ALSPAC/‘Children of the 90s’)

ALSPAC comprises ~14,500 families now over three generations: original mothers/fathers (G0), ‘children of the 90s’ (born 1991-92) (G1), and offspring of G1 born by 2018 (G2)¹⁻³. The G2 generation currently ranges in age from < 1 year to 13 years of age. The families were all originally from the Bristol/Avon area and ~50% still live in and around the city.



Executive summary

An ALSPAC COVID-19 questionnaire (collected between 26th May and 5th July 2020) focused on the impact of the pandemic as restrictions in the UK were eased. Schools started to re-open for young children from 1st June. G1 parents were asked to complete a questionnaire about each of their G2 children. These questions included parents’ and children’s pandemic-related worries, and children’s feelings and behaviour since lockdown.

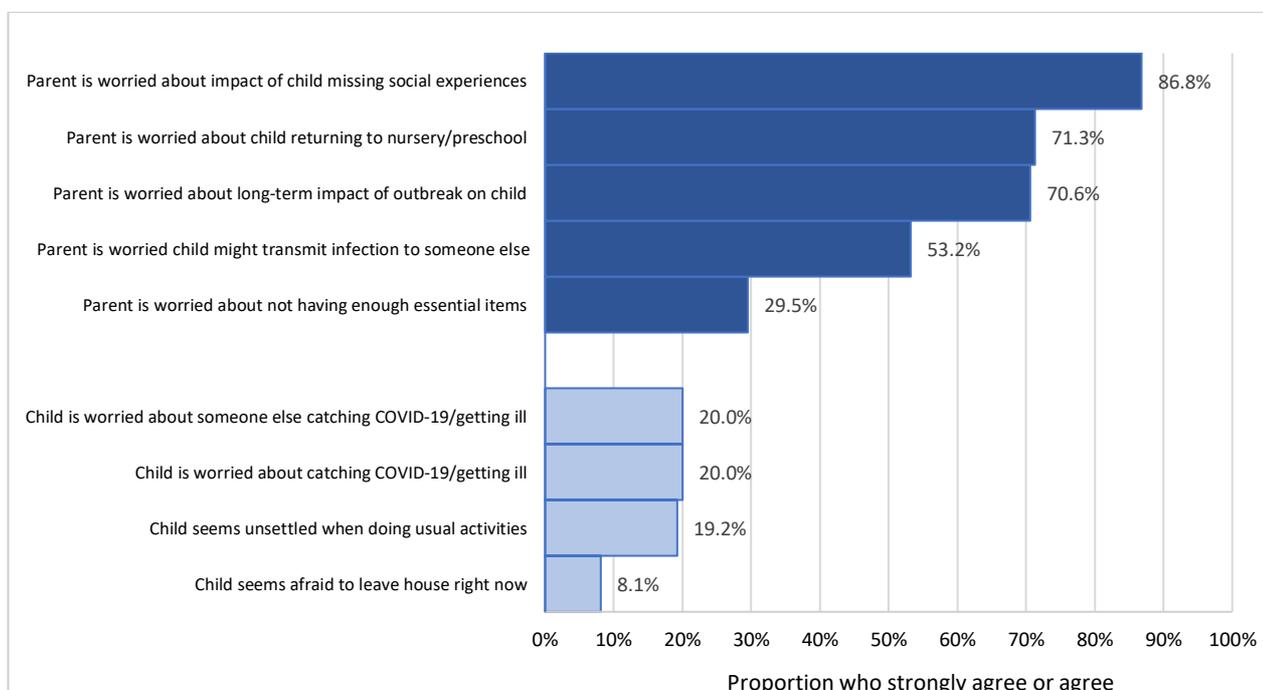
Parents and children had been in lockdown an average of 76 days (SD = 11.18) when they completed the questionnaire.

Parents’ and children’s COVID-19 pandemic-related worries in ALSPAC

Parent-reported data on parent and child worries related to the pandemic were available for 393 participants. Parents responded to two different sets of age-appropriate questions, depending on the age of their child.

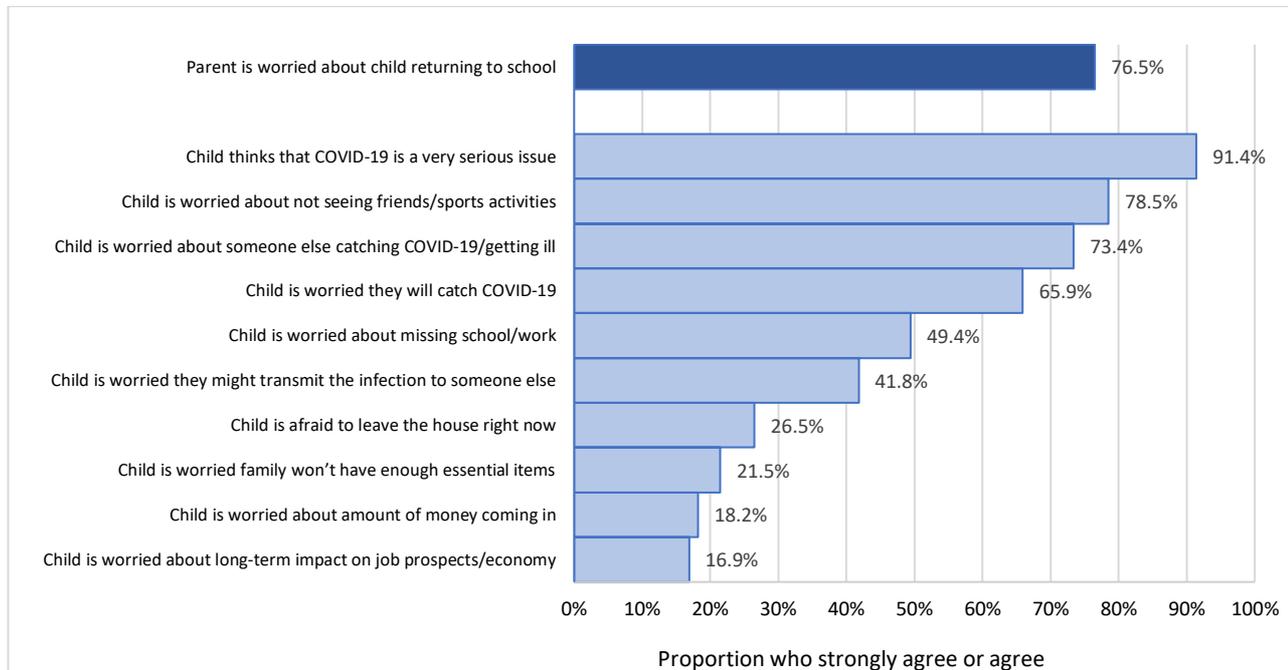
As can be seen in **Figure 1**, most **parents of young children** (aged less than 3 years) were concerned about the **impact of their child missing social experiences** and **when/if their child would return to nursery or school**. The majority of parents were also worried about the **long-term impact** that the pandemic would have on their child. Most children in this age group were too young (< 1 year old) for parents to contribute data on child worries.

Figure 1. COVID-19 pandemic-related worries in parents and younger children (ages < 1 to 3 years) in ALSPAC



The majority of parents of **older children** (ages 3 years and up) were also worried about their child returning to school (**Figure 2**). Most parents also thought that their children were **worried about not seeing their friends and missing activities**. Worries about having enough money and essential items were less common than were concerns related to the health aspects of COVID-19.

Figure 2. COVID-19 pandemic-related worries in parents and older children (ages 3 years and older) in ALSPAC



Children's emotional and behavioural difficulties in ALSPAC – before and during the lockdown

Parents reported on children's emotional and behavioural difficulties before and during the COVID-19 pandemic. Measures of pre-pandemic child emotional and behavioural difficulties were collected between May 2012 and December 2018. See additional information below for a list of age-appropriate measurements used.

At the time of the COVID survey, children ranged in age from < 1 year to 13, and the **average age was 5.32 years** (SD = 2.64).

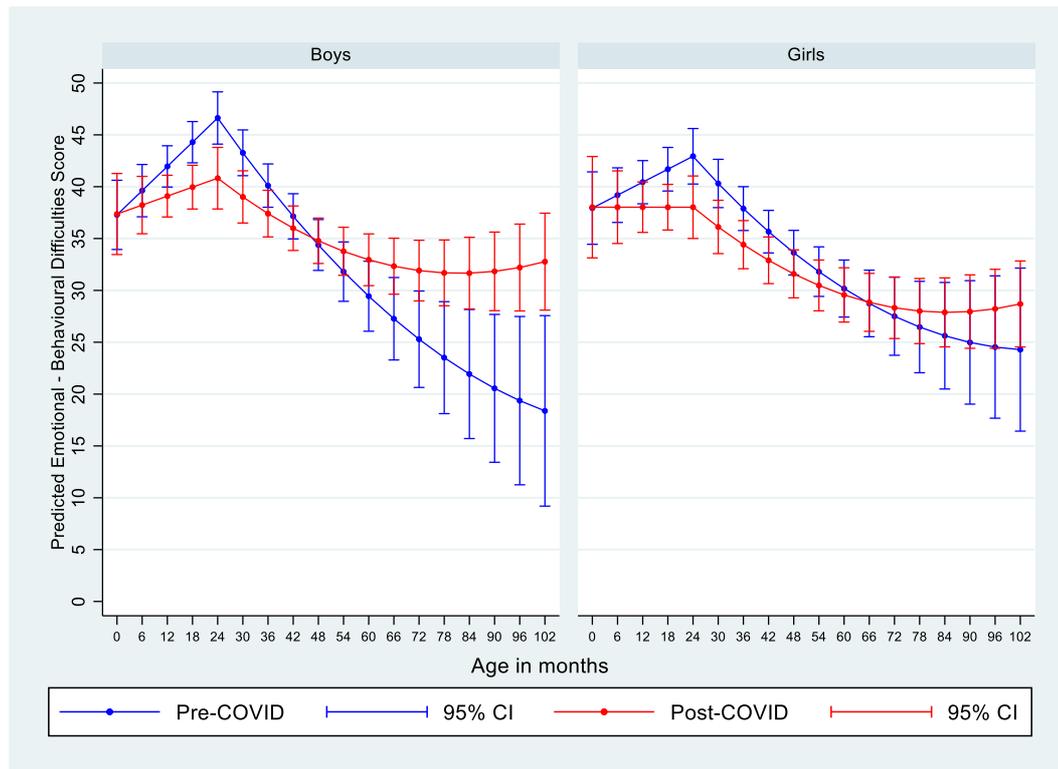
We used multi-level models to account for multiple children within families and multiple measurements within children for 393 children with COVID survey data. **Our goal was to compare whether children's trajectories of emotional and behavioural difficulties during the pandemic differ from expected pre-pandemic trajectories.**

There is observational evidence that children's emotional and behavioural difficulties increased during infancy and peaked around the age of 2 years, and then declined throughout the rest of childhood (blue lines in **Figure 3**).

However, there was evidence that this expected **decline in difficulties** after 2 years of age was **slower during the COVID-19 pandemic** (red lines in **Figure 3**).

This difference in post-age 2 trajectory slopes during the COVID-19 pandemic was more pronounced in boys than in girls. That is, the COVID-19 pandemic may be associated with greater emotional and behavioural difficulties in boys than in girls over the age of 2 years.

Figure 3. Trajectories over time of children’s emotional and behavioural difficulties before and during (“post-COVID”) the COVID-19 pandemic.



Additional information on measures of child emotional and behavioural difficulties

Measure	Child age at measurement
Carey Infant Temperament Questionnaire ⁴	6 months pre-pandemic and during the COVID-19 pandemic (ages < 1 year – 3 years)
Carey Toddler Temperament Questionnaire ⁵	24 months
The Emotionality Activity Sociability Temperament Survey for Children ⁶	36, 60- and 72-months pre-pandemic
Revised Rutter Parent Scale for Preschool Children ⁷	48 months pre-pandemic and during the COVID-19 pandemic (ages > 3 years)
Strengths & Difficulties Questionnaire ⁸	84 months

Source of information

The Avon Longitudinal Study of Parents and Children (ALSPAC) is a prospective population-based cohort study recruiting ~14500 pregnant women in 1990-1992. The health and development of the index children from these pregnancies and their family members have been followed ever since. More information can be found here: www.bris.ac.uk/alspac

1. Boyd A, Golding J, Macleod J, et al. Cohort Profile: the 'children of the 90s'--the index offspring of the Avon Longitudinal Study of Parents and Children. *Int J Epidemiol.* 2013;42(1):111-127. doi:10.1093/ije/dys064
2. Fraser A, Macdonald-Wallis C, Tilling K, et al. Cohort profile: the Avon Longitudinal Study of Parents and Children: ALSPAC mothers cohort. *Int J Epidemiol.* 2012;42(1):97–110.
3. Northstone K, Lewcock M, Groom A, et al. The Avon Longitudinal Study of Parents and Children (ALSPAC): an update on the enrolled sample of index children in 2019. *Wellcome Open Res.* 2019;4.
4. Carey WB, McDevitt SC. Revision of the infant temperament questionnaire. *Pediatrics.* 1978;61(5):735–739.
5. Fullard W, McDevitt SC, Carey WB. Assessing temperament in one-to three-year-old children. *J Pediatr Psychol.* 1984;9(2):205–217.
6. Buss A, Plomin R. *Temperament: Early Developing Personality Traits* Lawrence Erlbaum Associates. Lawrence Erlbaum; 1984.
7. Elander J, Rutter M. Use and development of the Rutter parents' and teachers' scales. *Int J Methods Psychiatr Res.* 1996;(6):63–78.
8. Goodman R. The Strengths and Difficulties Questionnaire: a research note. *J Child Psychol Psychiatry.* 1997;38(5):581–586.