

Report 07: Changes in parents' mental health symptoms and stressors from April to December 2020

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The Co-SPACE Study

Background

COVID-19 has caused major disruptions to families' lives in many ways, including through social distancing, home learning requirements, and lockdown. This is also a rapidly changing situation where different pressures have arisen and continue to arise for children, young people and their families over time.

The Co-SPACE project is tracking the mental health of school-aged children and young people aged 4-16 years (at the beginning of the study) throughout the COVID-19 crisis. An online survey is sent out and completed on a monthly basis by parents/carers and young people (if aged 11-16 years at baseline) throughout the pandemic. The study has full ethical and data protection approval (ethical approval ref: R69060) and is fully GDPR compliant.

The findings will help identify what protects children and young people from deteriorating mental health over time, and at particular stress points. Findings are being shared directly with health and education services to inform the development and provision of effective support for children and families.

Recruitment

The study sample has been recruited through a variety of means, including social media, distribution through partner organisations, networks and charities, the media and targeted online advertising. The self-selecting nature of recruitment means that this will not be a nationally representative sample. In the current report, 92.9 % of 6,246 participating parents were female. Furthermore, the majority of the sample was employed, either part-time (33.5 %) or full-time (31.5 %), had an average income of >16,000 (84.4 %), were white (93.7 %), and resided in Southern England (46.7 %). Further information about participants' characteristics can be found at the end of the report.

We remain keen to recruit as many families as possible to the study. Parents/carers can sign up and take part at any point: <https://cospaceoxford.com/survey>

Funding

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Focus of this report

In this report, we focus on parent/carers' self-reported mental health symptoms and stressors at monthly intervals from April to December 2020.

Participants

To date, over 12,500 parents/carers and 1,300 adolescents have taken part in the Co-SPACE survey at baseline. We continue to collect data at baseline and on a monthly basis.

This report provides an overview of monthly data from 6,246 parents/carers. These participants completed¹ the survey at least once between 17/04/2020² and 31/12/2020. Further information about overall participant characteristics can be found at the end of the report (Appendix A).

Participants were able to join the study at any point from March 2020. They then received each follow up questionnaire every month after completing the baseline survey. Of the overall sample, 4,380 (69.9%) completed at least one follow-up; while 3,218 (51.5 %) completed two or more follow-ups (up to eight follow-ups so far). Information on characteristics of participants included each month can also be seen at the end of the report (Appendix B and C). Each month represents the surveys completed at any point during that calendar month.

Data analysed

In this report we focus on:

- a) **Mental health outcomes as measured by the Depression, Anxiety and Stress Scale (DASS-21).** The DASS-21 is a useful and well-validated assessment of emotional disturbance. It is not a measure of clinical diagnoses. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content:
 - **Depression:** the depression scale assesses dysphoria (dissatisfaction), hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia (lack of pleasure) and inertia (inactivity).
 - **Anxiety:** the anxiety scale assesses autonomic arousal, situational anxiety, and subjective experience of anxious affect.
 - **Stress:** the stress scale assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient.

Participants are asked to score every item on a scale from 0 ("did not apply to me at all") to 3 ("applied to me very much"). Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items for each subscale and multiplying them by 2. Sum

¹ 'Completion' of the survey is based on participants having completed items up to and including the pre-defined main outcome measure (the DASS-21).

² Only partial data was collected for parental mental health before 17/04/2020 and thus was excluded to allow comparisons over time.

scores for the total DASS-total scale range between 0 and 126, and those for each of the subscales range between 0 and 42. DASS-21 scores are considered to be elevated, if they range above 7 for anxiety, above 9 for depression, and above 14 for stress subscale.

- b) How many parents/carers-reported being stressed about specific child-related stressors.** When completing the survey, parents/carers reported on how stressed they felt that week about their children's behaviour, wellbeing, screen time, education, and future.

Possible responses were "not at all", "a little", "quite a lot", "a great deal" and "not applicable". Categories indicating a substantial level of stress (i.e. "quite a lot" or "a great deal") were combined to indicate those who have been stressed, whilst those responding "a little" or "not at all" were considered to not be substantially stressed.

These outcomes were examined for the following five groups:

- 1. The whole sample**
- 2. Groups based on the presence of young children in the household** (whether or not there were any young children, aged 10 years or less, in the household)
- 3. Children and young people with and without special educational needs and/or neurodevelopmental disorders** (SEN/ND or no SEN/ND)³
- 4. Groups based on household income** (more or less than £16,000 per year, i.e., below the poverty line).
- 5. Groups based on whether or not the child lived in a single adult household**

³ The parents/carers are asked to report whether the child has a diagnosis of Attention-Deficit Disorder (ADD)/Attention-Deficit Hyperactivity Disorder (ADHD) or Autism Spectrum Disorder (ASD). To reflect the diagnostic criteria in this question, we use an umbrella term of neurodevelopmental disorders in line with DSM-5.

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Key findings

Based on average scores for parent/carer report within the Co-SPACE sample:

- Parental **stress and depression** were elevated during the first lockdown (when most children were home-schooled) and reduced when the lockdown restrictions eased in the summer.
- However, parental **stress, depression, and anxiety** increased between November and December (when new national restrictions were introduced).
- Parents/carers from certain households have been particularly vulnerable to elevated mental health symptoms, with higher levels of stress, depression, and anxiety reported by parents from **single adult households** and **low-income families**, as well as those who **have children with SEN/ND**.
- Parents who had **any young children (10 years or younger) living in the home** reported particularly high levels of stress symptoms during the first lockdown and around a third (36%) of them were stressed about their children's behaviour at that time (in contrast to 28% of those with older children only).
- Parents who had **older children only (11 years or older)** reported more depression symptoms, especially during the summer. On average, 43% were stressed about their children's education and future (in contrast to 32% of those with young children).

Findings

Notes for interpretation

In the figures, the dots represent the average DASS-21 scores for all surveys completed within that calendar month. As each follow-up survey asks to report on experiences in the past month, parents/carers will be partially reporting on some of the experiences of the previous month.

The shaded areas in the figures represent the confidence intervals (95% CI) around these scores, which indicate the range of values that the true population average score may fall in. As average scores are heavily affected by the variability in the data, a larger sample size will result in narrower and more accurate estimations of the population mean. This means that the true population mean is *less* accurately represented for the smaller groups (e.g. SEN/ND and <£16,000 household income groups in this report). Overlapping confidence intervals should be interpreted with caution.

The accompanying tables provide further information on the variability of the data by reporting means and standard deviations (SD) of reported difficulties. Standard deviations represent how spread out individual responses are around the average scores. A low standard deviation indicates that the values tend to be close to the average score, while a high standard deviation indicates that the values are spread out over a wider range. Changes in average scores with high SDs should also be interpreted cautiously.

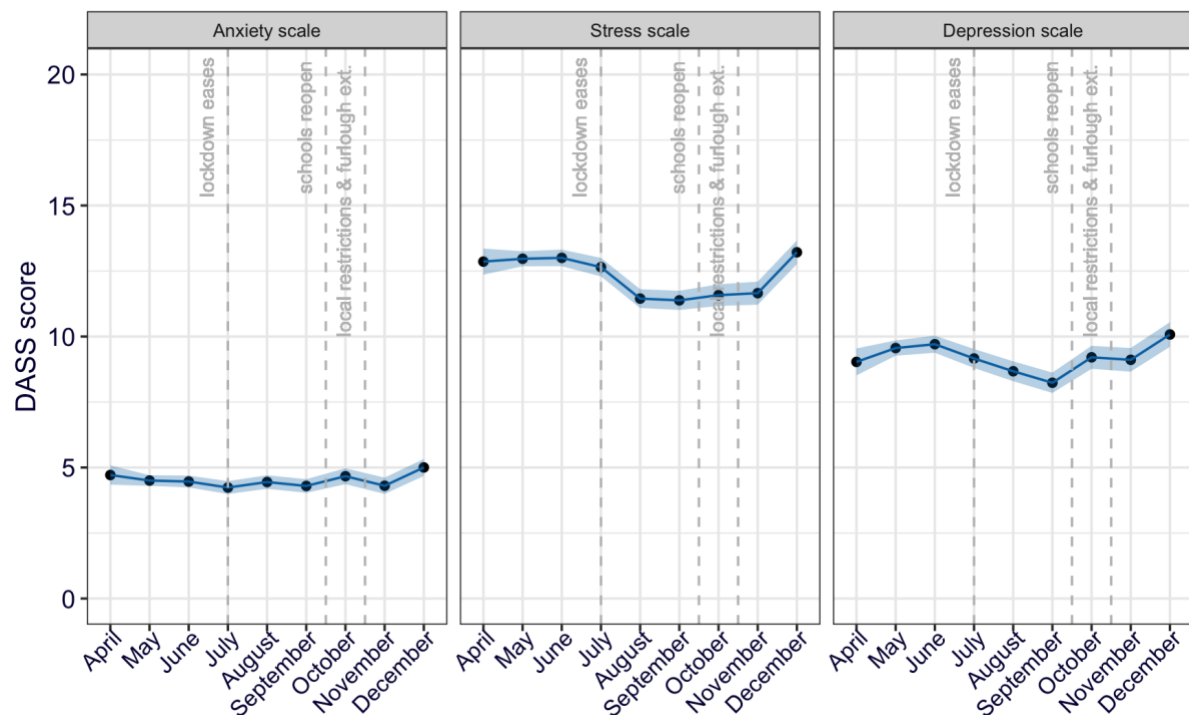
Explanation of the findings is provided based on statistical analysis rather than just graphical representation. Each analysis evaluated the effect of group and/or change from month to month. When possible, within family dependency over time was included in the analysis (i.e. over time scores from one family will be more similar than another). This allowed a more reliable estimation of month-to-month changes, where changes were mostly modelled based on full data (in this case, change in people who have both data points at each month-to-month comparison), but adjusted for partial and missing data, too.

Additionally, this report includes supplementary analysis on parent/carer stressed about their children's behaviour, wellbeing, screen time, education, and future. Figures in this part of the analysis represent a percentage of participants that month who have indicated being substantially stressed about these stressors (i.e. "quite a lot" or "a great deal") as opposed to those who were "a little" or "not at all" stressed. Any parents/carers, who indicated that stressor was not applicable to them, were excluded from these proportional estimations. Please note that the sample of participants slightly differed each month. Thus, small changes in percentages could reflect changes in sample rather than time and should be interpreted with caution.

1. The Whole Sample

(a) Parent/Carer Mental Health Symptoms

Figure 1. Means and 95% CI's of parents/carers reported DASS-21 scores per month



Overall, parent/carers depression scores increased from April to May, decreased from June to August, then increased again from September to October and November to December.

There were minimal changes in scores on the stress subscale from April to July, these then decreased post lockdown easing in July to August and increased substantially from November to December.

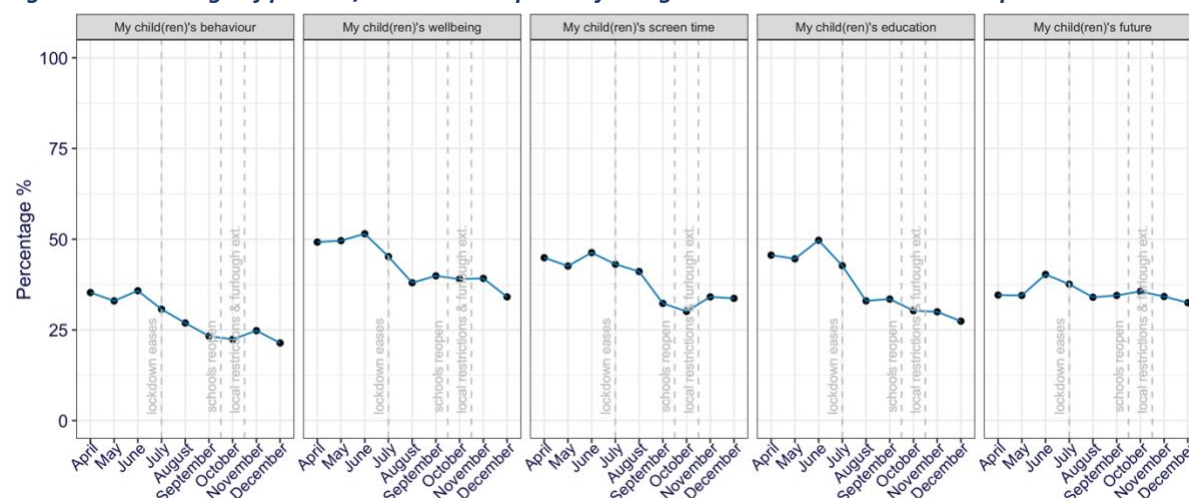
Average self-reported anxiety scores were relatively stable throughout the whole period aside from an increase from November to December.

Table 1. Means and standard deviations (SD) of parent/carers reported DASS-21 scores per month

	April	May	June	July	August	September	October	November	December
Anxiety subscale									
Mean	4.71	4.50	4.47	4.24	4.45	4.30	4.67	4.30	5.00
(SD)	(6.26)	(6.13)	(6.34)	(6.27)	(6.45)	(6.28)	(6.84)	(6.41)	(6.84)
Stress subscale									
Mean	12.9	13.0	13.0	12.6	11.4	11.4	11.6	11.7	13.2
(SD)	(8.49)	(8.68)	(8.93)	(9.03)	(9.01)	(8.84)	(9.29)	(9.09)	(9.56)
Depression subscale									
Mean	9.03	9.56	9.71	9.16	8.67	8.23	9.21	9.11	10.1
(SD)	(8.75)	(8.80)	(9.17)	(9.27)	(9.50)	(9.38)	(9.89)	(9.32)	(9.94)

(b) Parent/Carer Stressors

Figure 2. Percentage of parents/carers who reported feeling stressed about their children per month



The number of people who were stressed about their children's behaviour peaked in the first lockdown and decreased steadily from June to October.

Number of parents/carers stressed about their children's wellbeing was highest in June, and then continuously decreased until August and have remained relatively similar since.

Number of parents/carers stressed about children's screen time was highest during the first lockdown, between April and July. This decreased steadily from July as lockdown eased, but has gone up from October to December.

The number of people who were stressed about their children's education decreased from June to August and has remained relatively similar since.

The percentage of parents who were stressed about their children's future peaked in June but has remained relatively stable across the whole period.

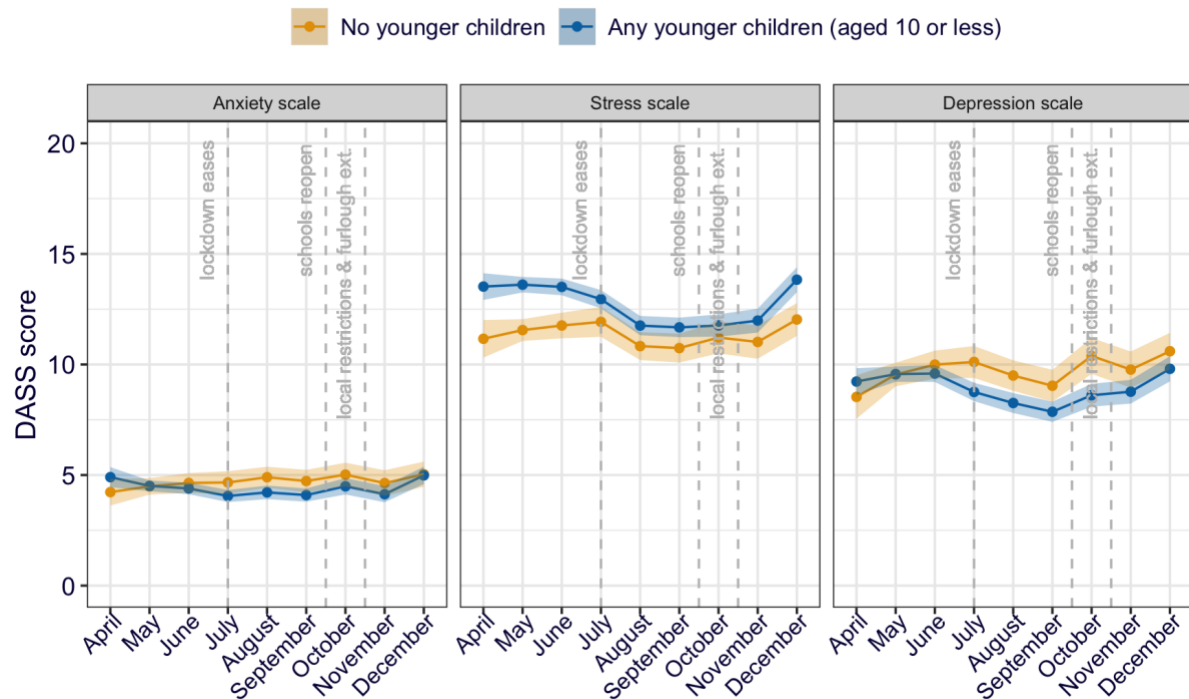
Table 2. Percentage of parents/carers who reported feeling stressed about their children per month

	April	May	June	July	August	September	October	November	December
Children's behaviour									
%	35.3	33.0	35.8	30.7	26.9	23.3	22.4	24.7	21.4
Children's wellbeing									
%	49.2	49.5	51.5	45.2	37.9	39.8	38.9	39.1	34.0
Children's screen time									
%	44.8	42.5	46.3	43.0	41.0	32.3	30.0	33.9	33.7
Children's education									
%	45.5	44.5	49.7	42.6	32.9	33.5	30.2	29.9	27.3
Children's future									
%	34.6	34.4	40.2	37.5	33.9	34.4	35.5	34.1	32.5

2. Presence of young children in the household

(a) Parent/Carer Mental Health Symptoms

Figure 3. Means and 95% CI's of parents/carers reported DASS-21 scores per month and presence of young children in the household



On average, parents/carers with any young children (aged 10 or less) in the household reported having more stress symptoms and being less depressed, but similarly anxious, compared to those with only secondary school-aged children (aged 11 or above).

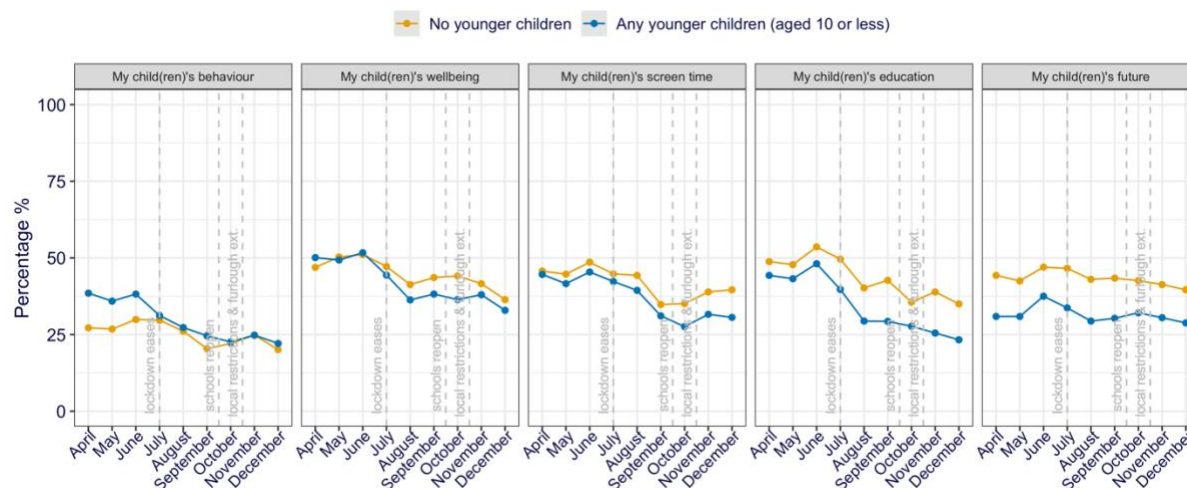
Over time, there were two main differences in relation to changes in parent/carers mental health symptoms between those with and without any young children. Between June and July, depression and anxiety scores decreased for parents/carers with younger children as lockdown eased, but not for parents with only older children. Between November and December, self-reported stress scores increased more substantially for parents/carers with younger children than those with only older children.

Table 3. Means and standard deviations (SD) of parent/carer's DASS scores per month and presence of young children in the household

	April	May	June	July	August	September	October	November	December
Anxiety subscale									
Any young children									
Mean	4.90	4.51	4.39	4.05	4.22	3.94	4.30	3.95	4.86
(SD)	(6.54)	(6.07)	(6.17)	(5.87)	(6.21)	(5.78)	(6.53)	(5.62)	(6.45)
No young children									
Mean	4.23	4.49	4.64	4.66	4.90	4.94	5.25	4.87	5.24
(SD)	(5.47)	(6.28)	(6.76)	(7.10)	(6.87)	(7.06)	(7.29)	(7.46)	(7.44)
Depression subscale									
Any young children									
Mean	9.23	9.57	9.59	8.76	8.26	7.68	8.43	8.54	9.80
(SD)	(8.71)	(8.71)	(8.99)	(8.88)	(9.21)	(8.97)	(9.28)	(8.70)	(9.59)
No young children									
Mean	8.53	9.54	9.99	10.1	9.50	9.24	10.4	10.0	10.5
(SD)	(8.85)	(9.00)	(9.59)	(10.1)	(10.0)	(10.0)	(10.7)	(10.2)	(10.5)
Stress subscale									
Any young children									
Mean	13.5	13.6	13.5	13.0	11.8	11.7	11.8	12.0	14.0
(SD)	(8.71)	(8.76)	(8.94)	(8.85)	(8.93)	(8.73)	(9.17)	(8.82)	(9.50)
No young children									
Mean	11.2	11.6	11.8	11.9	10.8	10.7	11.2	11.1	12.0
(SD)	(7.63)	(8.32)	(8.78)	(9.40)	(9.12)	(9.01)	(9.47)	(9.49)	(9.54)

(b) Parent/Carer Stressors

Figure 4. Percentage of parents/carers who reported feeling stressed about their children per month and presence of young children in the household



Change over time in the proportion of parents/carers who were stressed about their children's wellbeing, screen time, behaviour, and future followed a similar pattern when parents/carers were split into groups based on whether they had any young children in the household (aged 10 years or less).

Throughout the whole period, more parents/carers with young children (29.4% on average, but 35.9% during lockdown) reported being stressed about their children's behaviour compared to those with older children only (25% on average and 28% during

lockdown). However, parents/carers of older children (43.2% on average) were more likely to be stressed about their children's future than those with young children (31.5% on average).

Between July and December, more parents/carers with older children only (43.4% on average) reported being stressed about their children's education, compared to parents with any young children (34.5% on average). This difference was not observed between the two groups before June.

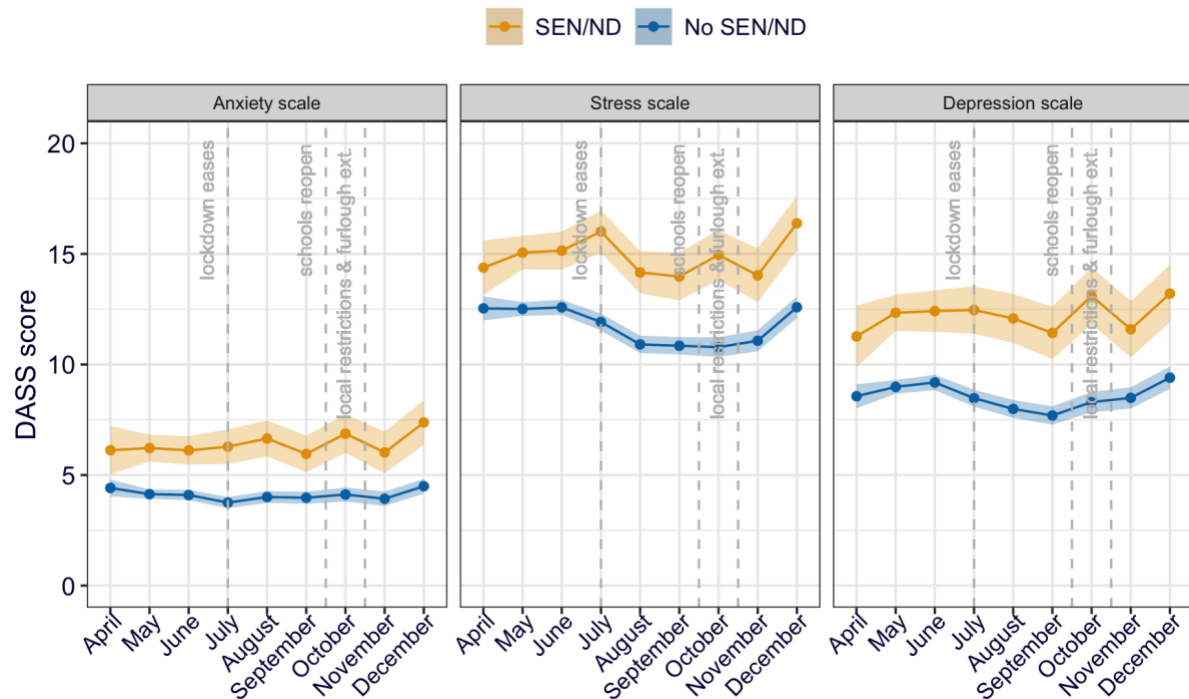
Table 4. Percentage of parents/carers who reported feeling stressed about their children per month and presence of young children in the household

	April	May	June	July	August	September	October	November	December
Children's behaviour									
Any younger children									
%	38.5	35.8	38.2	31.1	27.3	24.6	22.6	24.8	22.1
No younger children									
%	27.2	26.8	29.9	29.6	26.1	20.3	21.9	24.6	20.1
Children's wellbeing									
Any younger children									
%	50.1	49.2	51.7	44.4	36.2	38.2	36.4	37.9	32.8
No younger children									
%	46.9	50.2	51.1	47.1	41.2	43.5	44.0	41.3	36.3
Children's screen time									
Any younger children									
%	44.5	41.5	45.3	42.3	39.4	31.1	27.5	31.5	30.6
No younger children									
%	45.7	44.6	48.6	44.7	44.1	34.7	34.9	38.7	39.6
Children's education									
Any younger children									
%	44.3	43.2	48.1	39.7	29.3	29.3	27.6	25.4	23.3
No younger children									
%	48.5	47.6	53.5	49.5	40.0	42.6	35.4	38.7	35.0
Children's future									
Any younger children									
%	30.8	30.9	37.5	33.7	29.3	30.2	32.0	30.4	28.8
No younger children									
%	44.1	42.3	46.9	46.4	42.8	43.3	42.4	41.1	39.5

3. Special Educational Needs and Neurodevelopmental Disorders

(a) Parent/Carer Mental Health Symptoms

Figure 5. Means and 95% CI's of parents/carers reported DASS-21 scores per month and Special Educational Needs (SEN) or Neurodevelopmental Disorders (ND)



Overall, parents/carers who reported that their index child had SEN/ND⁴ reported higher levels of anxiety, stress, and depression symptoms than other parents in the study. Patterns of change over time were similar across the three measures with a particular spike across measures from November to December.

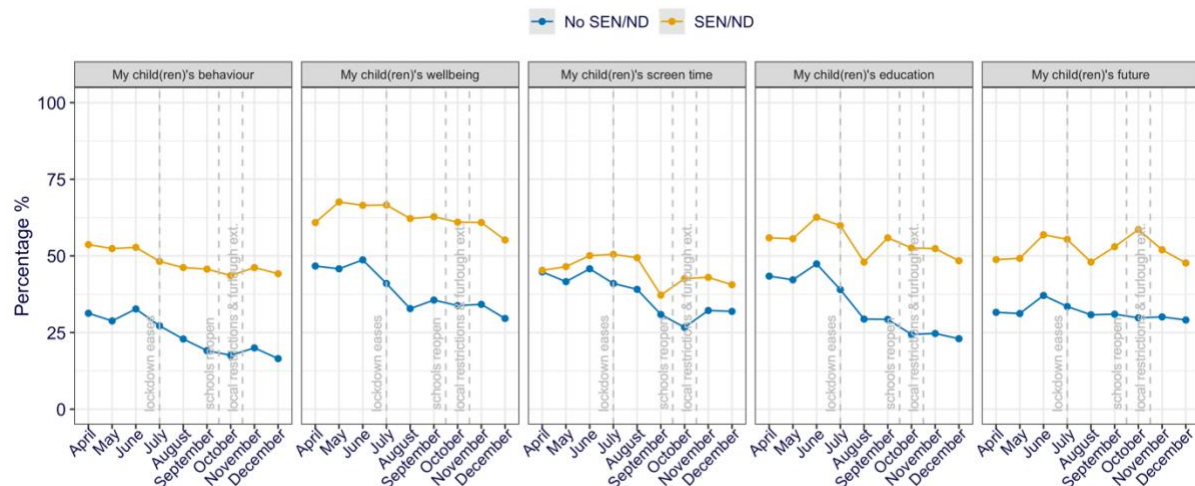
⁴ Only the SEN/ND information for the index child (the child nominated for the study) is included here. Therefore, the "No SEN/ND" group could include some parents and carers who have other children with SEN/ND.

Table 5. Means and standard deviations (SD) of parent/carer's DASS scores per month and Special Educational Needs (SEN) or Neurodevelopmental Disorders (ND)

	April	May	June	July	August	September	October	November	December
Anxiety subscale									
SEN/ND									
Mean	6.12	6.22	6.12	6.28	6.65	5.95	6.87	6.02	7.38
(SD)	(7.77)	(7.54)	(7.39)	(8.07)	(8.36)	(7.81)	(8.19)	(7.95)	(8.45)
No SEN/ND									
Mean	4.42	4.14	4.10	3.75	4.01	3.97	4.12	3.93	4.49
(SD)	(5.86)	(5.73)	(5.96)	(5.65)	(5.95)	(5.91)	(6.34)	(5.94)	(6.30)
Depression subscale									
SEN/ND									
Mean	11.3	12.3	12.4	12.5	12.1	11.4	13.1	11.6	13.2
(SD)	(9.83)	(10.3)	(10.7)	(11.0)	(11.3)	(11.2)	(12.1)	(10.7)	(11.0)
No SEN/ND									
Mean	8.56	8.99	9.19	8.47	7.99	7.69	8.30	8.49	9.40
(SD)	(8.44)	(8.34)	(8.71)	(8.67)	(9.01)	(8.95)	(9.14)	(8.86)	(9.55)
Stress subscale									
SEN/ND									
Mean	14.4	15.1	15.1	16.0	14.2	14.0	15.0	14.0	16.4
(SD)	(8.76)	(9.50)	(9.76)	(9.80)	(9.74)	(10.2)	(10.6)	(10.2)	(10.4)
No SEN/ND									
Mean	12.5	12.5	12.6	11.9	10.9	10.8	10.8	11.1	12.6
(SD)	(8.40)	(8.41)	(8.63)	(8.67)	(8.80)	(8.45)	(8.84)	(8.72)	(9.26)

(b) Parent/Carer Stressors

Figure 6. Percentage of parents/carers who reported feeling stressed about their children per month and Special Educational Needs (SEN) or Neurodevelopmental Disorders (ND)



Proportionally, more parents/carers of children with SEN/ND were stressed about all 5 child-related stress items: their children's behaviour (48% vs. 24% on average), wellbeing (62.5% vs. 38.7% on average), screen time (44.9% vs. 37% on average), education (54.3% vs. 33.6% on average), and future (52% vs. 31.5% on average).

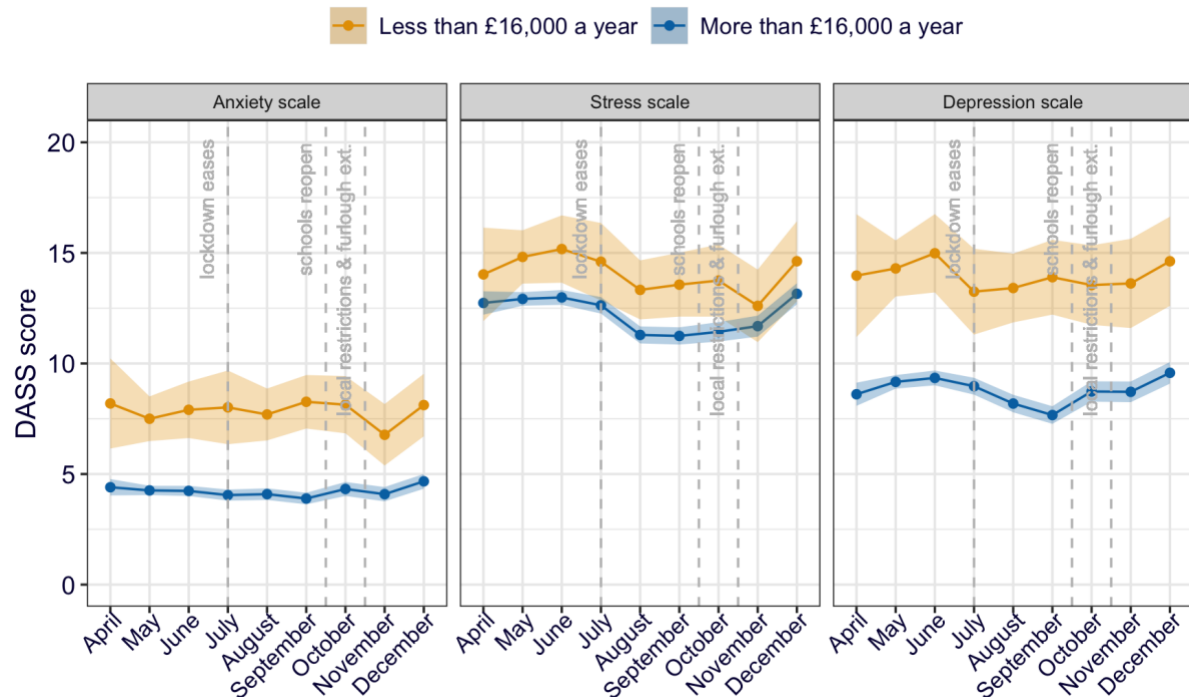
Table 6. Percentage of parents/carers who reported feeling stressed about their children per month and Special Educational Needs (SEN) or Neurodevelopmental Disorders (ND)

	April	May	June	July	August	September	October	November	December
Children's behaviour									
SEN/ND									
%	53.7	52.3	52.7	47.8	46.2	45.6	43.6	45.8	44.2
No SEN/ND									
%	31.3	28.8	32.7	27.2	22.9	19.1	17.5	20.0	16.4
Children's wellbeing									
SEN/ND									
%	60.6	67.6	66.5	66.4	61.9	62.8	61.0	60.7	55.0
No SEN/ND									
%	46.7	45.7	48.7	40.9	32.8	35.6	33.8	34.1	29.6
Children's screen time									
SEN/ND									
%	45.3	46.4	50.1	50.2	49.1	37.2	42.5	42.5	40.6
No SEN/ND									
%	44.7	41.5	45.7	41.0	39.0	30.9	26.7	32.1	31.8
Children's education									
SEN/ND									
%	55.7	55.5	62.6	59.4	47.7	55.9	52.0	52.0	48.2
No SEN/ND									
%	43.3	42.1	47.4	39.0	29.3	29.2	24.4	24.6	23.0
Children's future									
SEN/ND									
%	48.8	49.0	56.6	55.3	47.9	53.0	58.1	51.6	47.5
No SEN/ND									
%	31.5	31.1	37.1	33.5	30.7	31.0	29.7	30.0	29.0

4. Household Income

(a) Parent/Carer Mental Health Symptoms

Figure 7. Means and 95% CI's of parents/carers reported DASS-21 scores per month and household income



On average, parents/carers from households with lower annual incomes (< £16,000 p.a.) reported feeling more anxious, stressed, and depressed than parents/carers from households with higher annual income (> £16,000 p.a.).

For parents/carers in both income groups, scores on the anxiety subscale were relatively stable from April to October before increasing in December.

Scores on the depression subscale followed a mostly similar pattern of change over time for both income groups - increasing over the first lockdown, decreasing as lockdown measures were eased and increasing again in autumn. However, while the higher income group reported a decrease in depression symptoms from July to August, there was an increase in depression scores for parents/carers from lower income households.

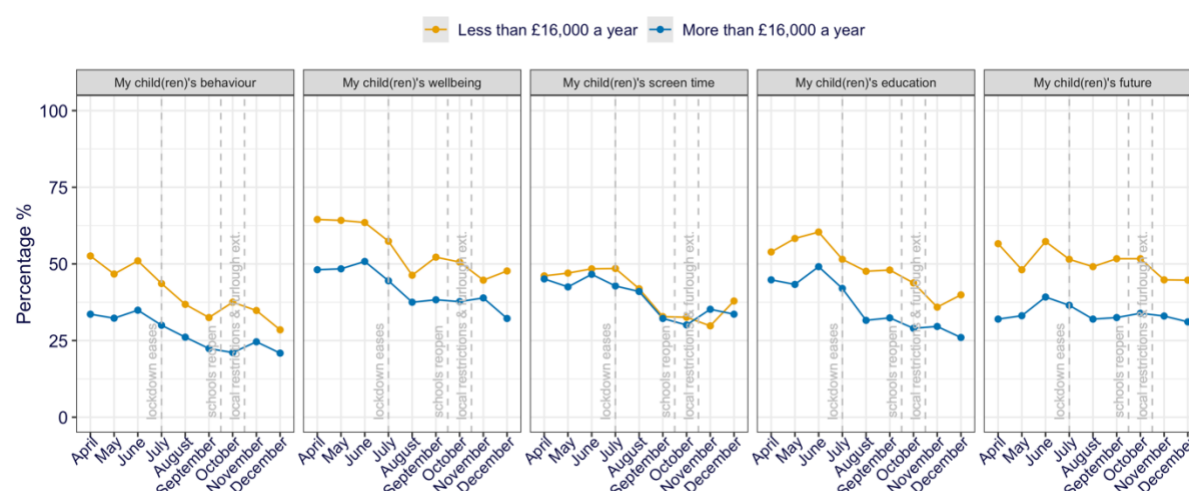
Reported stress symptoms were elevated for parents/carers with lower annual income throughout, but patterns of change were similar for parents/carers from both income groups. For both groups stress symptoms decreased post lockdown easing in July to August and increased substantially from November to December.

Table 7. Means and standard deviations (SD) of parent/carer's DASS scores per month and household income

	April	May	June	July	August	September	October	November	December
Anxiety subscale									
Less than £16,000 a year									
Mean	8.19	7.50	7.90	8.02	7.69	8.27	8.14	6.77	8.12
(SD)	(8.74)	(8.39)	(8.90)	(9.71)	(8.99)	(8.71)	(8.71)	(8.38)	(8.78)
More than £16,000 a year									
Mean	4.40	4.26	4.24	4.05	4.09	3.89	4.32	4.09	4.67
(SD)	(5.85)	(5.84)	(6.03)	(5.96)	(6.00)	(5.79)	(6.52)	(6.13)	(6.49)
Depression subscale									
Less than £16,000 a year									
Mean	14.0	14.3	15.0	13.2	13.4	13.9	13.5	13.6	14.6
(SD)	(11.9)	(10.6)	(12.3)	(11.3)	(11.9)	(12.2)	(12.1)	(12.2)	(12.5)
More than £16,000 a year									
Mean	8.61	9.17	9.35	8.97	8.19	7.67	8.73	8.72	9.58
(SD)	(8.27)	(8.53)	(8.77)	(9.12)	(9.07)	(8.83)	(9.50)	(8.90)	(9.52)
Stress subscale									
Less than £16,000 a year									
Mean	14.0	14.8	15.2	14.6	13.3	13.6	13.8	12.6	14.6
(SD)	(8.93)	(10.0)	(10.6)	(10.2)	(10.2)	(10.4)	(11.0)	(9.89)	(11.3)
More than £16,000 a year									
Mean	12.7	12.9	13.0	12.6	11.3	11.2	11.4	11.7	13.2
(SD)	(8.37)	(8.56)	(8.79)	(8.92)	(8.83)	(8.65)	(9.06)	(9.03)	(9.32)

(b) Parent/Carer Stressors

Figure 8. Percentage of parents/carers who reported feeling stressed about their children per month and household income



A larger proportion of parents/carers from lower income households were stressed about their children's behaviour (by 12.9%), wellbeing (by 12.6%), education (by 12.4%), and future (by 16.8%) than those from higher income households. The proportion of parents who were stressed about their children's screen time was similar across both income groups (40.4% to 38.7%).

Table 8. Percentage of parents/carers who reported feeling stressed about their children per month and household income

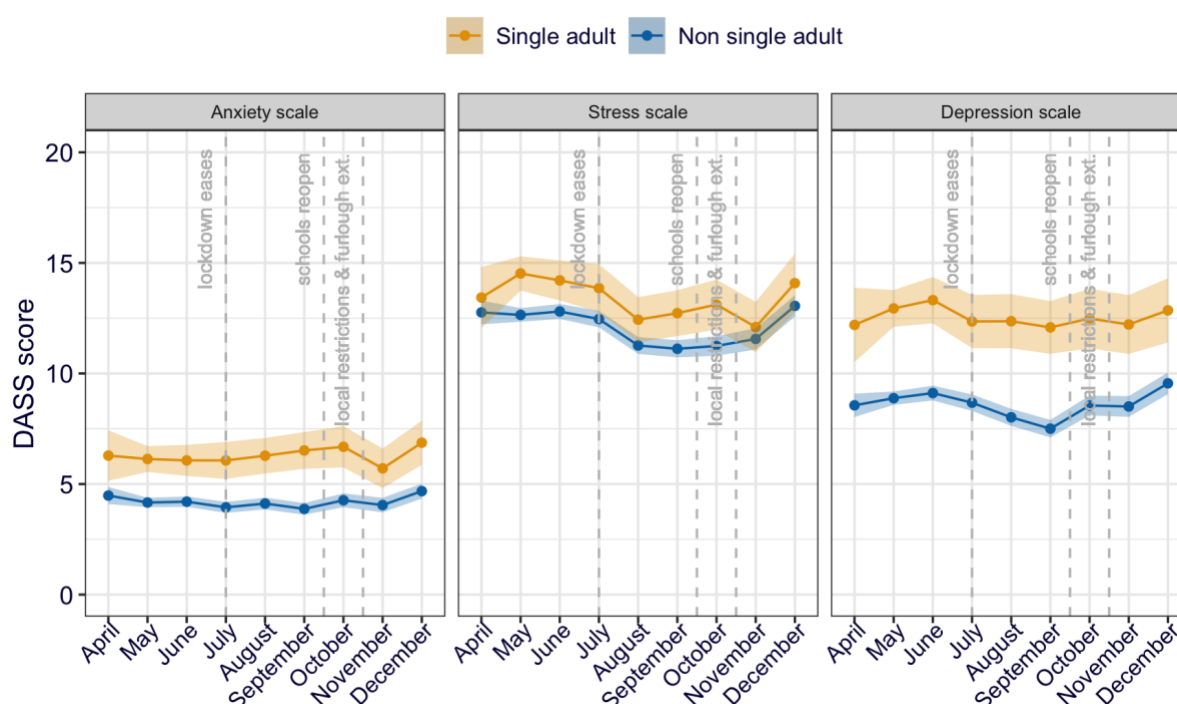
	April	May	June	July	August	September	October	November	December
Children's behaviour									
Less than £16,000 a year									
%	52.6	46.7	51.0	42.6	36.7	32.4	37.3	34.3	28.1
More than £16,000 a year									
%	33.6	32.2	34.9	30.0	26.1	22.4	21.0	24.5	20.8
Children's wellbeing									
Less than £16,000 a year									
%	64.5	64.0	63.5	57.4	45.9	52.0	50.3	44.1	47.7
More than £16,000 a year									
%	48.1	48.3	50.8	44.5	37.4	38.2	37.7	38.7	32.1
Children's screen time									
Less than £16,000 a year									
%	46.1	46.7	48.4	48.5	41.5	32.8	32.2	29.4	37.9
More than £16,000 a year									
%	45.0	42.4	46.6	42.8	40.9	32.1	30.0	35.1	33.6
Children's education									
Less than £16,000 a year									
%	53.9	58.1	60.4	51.5	47.6	48.0	43.5	35.7	39.9
More than £16,000 a year									
%	44.7	43.2	49.1	42.0	31.4	32.3	28.8	29.5	26.0
Children's future									
Less than £16,000 a year									
%	56.6	47.8	57.3	51.5	48.9	51.5	51.4	44.8	44.4
More than £16,000 a year									
%	31.9	33.1	39.1	36.4	31.9	32.5	33.8	32.9	31.1

5. Single Adult Household

(a) Parent/Carer Mental Health Symptoms

Parents/carers were asked about the people living in their household and their ages. Approximately 14.2% of parent/carers reported that they were the only individual over the age of 18 years living in the household.

Figure 9. Means and 95% CI's of parents/carers reported DASS-21 scores per month and household member structure



Single parents/carers reported overall higher levels of anxiety, stress, and depression symptoms than parents who lived with other adults in the household.

For both groups, self-reported depression steadily increased up to June and then decreased. Parents/carers with other adults in the household reported lowest levels of depression in September, which then increased in October and December. Parents/carers from single adult households reported a particular increase in their levels of depression in December (but not in October).

Parents/carers from single adult households reported more stress symptoms overall but also reported a sharper increase in their stress levels during the first lockdown (April-May). Both groups reported a decrease in stress symptoms after the first lockdown eased and a sharp increase in December.

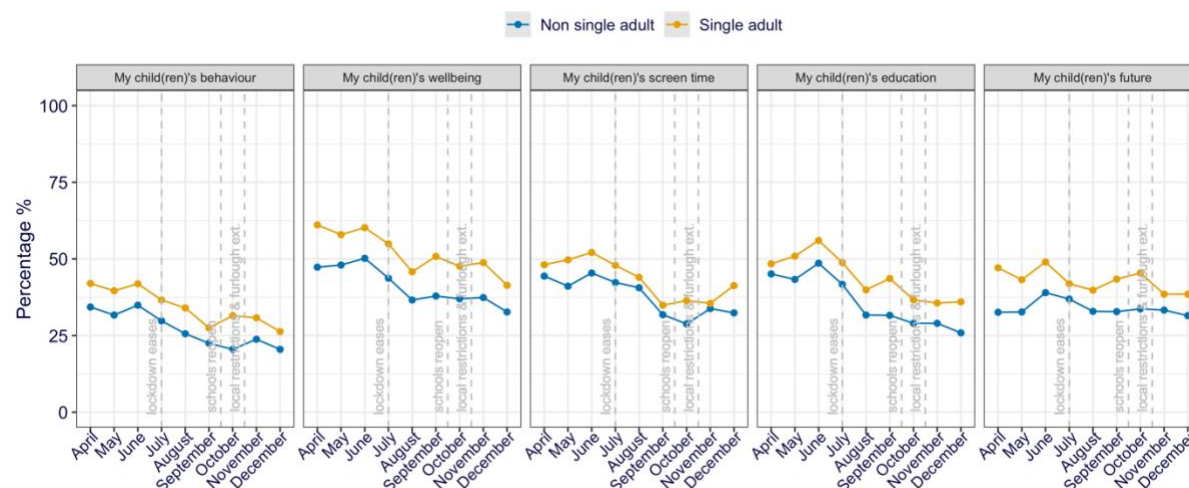
For both groups, self-reported anxiety increased from September to October and November to December, but remained relatively stable otherwise (albeit the single parents/carers were more anxious overall).

Table 9. Means and standard deviations (SD) of parent/carer's DASS scores per month and number of adults in the household

	April	May	June	July	August	September	October	November	December
Anxiety subscale									
Single adult									
Mean	6.29	6.13	6.07	6.07	6.28	6.52	6.68	5.71	6.87
(SD)	(7.12)	(7.13)	(7.43)	(7.61)	(7.78)	(8.00)	(8.39)	(7.34)	(8.16)
Non-single adult									
Mean	4.48	4.16	4.20	3.95	4.12	3.88	4.27	4.05	4.68
(SD)	(6.09)	(5.85)	(6.12)	(5.95)	(6.12)	(5.81)	(6.41)	(6.19)	(6.55)
Depression subscale									
Single adult									
Mean	12.2	12.9	13.3	12.4	12.4	12.1	12.5	12.2	12.9
(SD)	(10.5)	(10.2)	(11.0)	(11.0)	(11.9)	(11.5)	(12.1)	(10.9)	(11.9)
Non-single adult									
Mean	8.56	8.88	9.11	8.68	8.02	7.50	8.55	8.51	9.55
(SD)	(8.35)	(8.33)	(8.69)	(8.89)	(8.86)	(8.75)	(9.26)	(8.88)	(9.48)
Stress subscale									
Single adult									
Mean	13.4	14.5	14.2	13.9	12.4	12.7	13.1	12.1	14.1
(SD)	(8.60)	(9.52)	(9.54)	(9.89)	(9.93)	(9.98)	(10.2)	(9.29)	(10.9)
Non-single adult									
Mean	12.8	12.6	12.8	12.5	11.3	11.1	11.2	11.6	13.1
(SD)	(8.48)	(8.46)	(8.82)	(8.87)	(8.82)	(8.59)	(9.08)	(9.05)	(9.29)

(b) Parent/Carer Stressors

Figure 10. Percentage of parents/carers who reported feeling stressed about their children per month and household income



On average, slightly more parents/carers from single adult households were stressed about their children's behaviour (34.3% vs. 27%), wellbeing (51.9% vs. 41.1%), screen time (43.2% vs. 37.8%), education (43.9% vs. 36.8%), and future (42.8% vs. 33.9%) in comparison to parents/carers who had other adults in the household.

Table 10. Percentage of parents/carers who reported feeling stressed about their children per month and household income

	April	May	June	July	August	September	October	November	December
Children's behaviour									
Single adult									
%	41.8	39.6	41.9	36.3	33.9	27.3	31.4	30.5	26.1
Non-single adult									
%	34.3	31.7	34.9	29.8	25.6	22.5	20.4	23.7	20.5
Children's wellbeing									
Single adult									
%	60.8	57.6	60.2	54.9	45.6	50.6	47.6	48.5	41.3
Non-single adult									
%	47.3	47.9	50.1	43.7	36.5	37.8	37.0	37.3	32.6
Children's screen time									
Single adult									
%	48.1	49.6	52.1	47.9	43.7	34.8	36.2	35.1	41.3
Non-single adult									
%	44.3	41.0	45.3	42.3	40.5	31.8	28.7	33.7	32.4
Children's education									
Single adult									
%	48.1	50.6	56.0	48.8	39.9	43.6	36.5	35.5	36.0
Non-single adult									
%	45.1	43.3	48.6	41.6	31.6	31.6	28.9	29.0	25.9
Children's future									
Single adult									
%	46.8	43.0	48.8	41.8	39.6	43.4	45.4	38.5	38.3
Non-single adult									
%	32.6	32.7	38.9	36.8	32.8	32.7	33.5	33.2	31.5

Appendix A

Participants' demographics overall:

	Overall (N=6246)
Relationship to Child	
Parent	6141 (98.3%)
Other	36 (0.6%)
Grandparent	39 (0.6%)
Step-parent	30 (0.5%)
Location	
Greater London	617 (9.9%)
Northern England	1239 (19.8%)
Northern Ireland	82 (1.3%)
Scotland	397 (6.4%)
Southern England	2914 (46.7%)
the Midlands	753 (12.1%)
Wales	244 (3.9%)
Parent Gender	
Female	5800 (92.9%)
Male	408 (6.5%)
Missing	38 (0.6%)
Employment Status	
Self employed	632 (10.1%)
Unemployed/Other	1084 (17.4%)
Working full time	2206 (35.3%)
Working part time	2324 (37.2%)
Household Income	
Less than £16,000 a year	537 (8.6%)
More than £16,000 a year	5273 (84.4%)
Missing	436 (7.0%)
Single Adult Household	
Non-single adult	5189 (83.1%)
Single adult	1014 (16.2%)
Missing	43 (0.7%)
Parent Ethnicity	
BAME	230 (3.7%)
White	5855 (93.7%)
Missing	161 (2.6%)
Young Children in Household	
No younger children	1961 (31.4%)
Any younger children (aged 10 or less)	4285 (68.6%)
Index Child Gender	
Female	2977 (47.7%)
Male	3193 (51.1%)
Missing	76 (1.2%)
Index Child Age	
Adolescent (11-17 years)	2281 (36.5%)
Child (4-10 years)	3965 (63.5%)
Index Child's SEN/ND Status	
No SEN/ND	5004 (80.1%)
SEN/ND	1086 (17.4%)
Missing	156 (2.5%)
Index Child's Mental Health	
Depression, anxiety, or other	333 (5.3%)
No	5757 (92.2%)
Missing	156 (2.5%)

Appendix B

Participants' demographics per month: April to December

	Apr N=1123	May N=3532	Jun N=3062	Jul N=2529	Aug N=2430	Sep N=2255	Oct N=1955	Nov N=1649	Dec N=1729
Location									
Greater London	115 (10.2%)	344 (9.7%)	305 (10.0%)	251 (9.9%)	232 (9.5%)	227 (10.1%)	191 (9.8%)	170 (10.3%)	157 (9.1%)
Northern England	217 (19.3%)	692 (19.6%)	573 (18.7%)	455 (18.0%)	496 (20.4%)	463 (20.5%)	404 (20.7%)	321 (19.5%)	336 (19.4%)
Northern Ireland	17 (1.5%)	41 (1.2%)	30 (1.0%)	28 (1.1%)	30 (1.2%)	28 (1.2%)	23 (1.2%)	18 (1.1%)	21 (1.2%)
Scotland	70 (6.2%)	236 (6.7%)	162 (5.3%)	151 (6.0%)	127 (5.2%)	113 (5.0%)	100 (5.1%)	69 (4.2%)	91 (5.3%)
Southern England	530 (47.2%)	1677 (47.5%)	1528 (49.9%)	1253 (49.5%)	1142 (47.0%)	1068 (47.4%)	922 (47.2%)	807 (48.9%)	847 (49.0%)
the Midlands	112 (10.0%)	422 (11.9%)	365 (11.9%)	307 (12.1%)	314 (12.9%)	281 (12.5%)	245 (12.5%)	219 (13.3%)	226 (13.1%)
Wales	62 (5.5%)	120 (3.4%)	99 (3.2%)	84 (3.3%)	89 (3.7%)	75 (3.3%)	70 (3.6%)	45 (2.7%)	51 (2.9%)
Parent Gender									
Female	1055 (93.9%)	3315 (93.9%)	2872 (93.8%)	2336 (92.4%)	2243 (92.3%)	2097 (93.0%)	1783 (91.2%)	1515 (91.9%)	1578 (91.3%)
Male	64 (5.7%)	199 (5.6%)	179 (5.8%)	169 (6.7%)	168 (6.9%)	144 (6.4%)	157 (8.0%)	125 (7.6%)	141 (8.2%)
Missing	4 (0.4%)	18 (0.5%)	11 (0.4%)	24 (0.9%)	19 (0.8%)	14 (0.6%)	15 (0.8%)	9 (0.5%)	10 (0.6%)
Employment Status									
Self employed	110 (9.8%)	354 (10.0%)	317 (10.4%)	253 (10.0%)	243 (10.0%)	212 (9.4%)	206 (10.5%)	170 (10.3%)	179 (10.4%)
Unemployed/Other	178 (15.9%)	554 (15.7%)	484 (15.8%)	372 (14.7%)	462 (19.0%)	417 (18.5%)	374 (19.1%)	315 (19.1%)	303 (17.5%)
Working full time	407 (36.2%)	1273 (36.0%)	1046 (34.2%)	879 (34.8%)	764 (31.4%)	731 (32.4%)	628 (32.1%)	510 (30.9%)	558 (32.3%)
Working part time	428 (38.1%)	1351 (38.3%)	1215 (39.7%)	1025 (40.5%)	961 (39.5%)	895 (39.7%)	747 (38.2%)	654 (39.7%)	689 (39.8%)
Household Income									
Less than £16,000 a year	73 (6.5%)	269 (7.6%)	189 (6.2%)	134 (5.3%)	229 (9.4%)	202 (9.0%)	176 (9.0%)	142 (8.6%)	151 (8.7%)
More than £16,000 a year	963 (85.8%)	3006 (85.1%)	2646 (86.4%)	2205 (87.2%)	2028 (83.5%)	1898 (84.2%)	1645 (84.1%)	1398 (84.8%)	1465 (84.7%)
Missing	87 (7.7%)	257 (7.3%)	227 (7.4%)	190 (7.5%)	173 (7.1%)	155 (6.9%)	134 (6.9%)	109 (6.6%)	113 (6.5%)
Single Adult Household									
Non single adult	963 (85.8%)	2933 (83.0%)	2618 (85.5%)	2194 (86.8%)	2056 (84.6%)	1888 (83.7%)	1628 (83.3%)	1383 (83.9%)	1452 (84.0%)
Single adult	153 (13.6%)	583 (16.5%)	431 (14.1%)	323 (12.8%)	366 (15.1%)	360 (16.0%)	314 (16.1%)	260 (15.8%)	261 (15.1%)
Missing	7 (0.6%)	16 (0.5%)	13 (0.4%)	12 (0.5%)	8 (0.3%)	7 (0.3%)	13 (0.7%)	6 (0.4%)	16 (0.9%)
Parent Ethnicity									
BAME	32 (2.8%)	99 (2.8%)	89 (2.9%)	71 (2.8%)	84 (3.5%)	87 (3.9%)	73 (3.7%)	60 (3.6%)	61 (3.5%)
White	1064 (94.7%)	3356 (95.0%)	2903 (94.8%)	2399 (94.9%)	2295 (94.4%)	2115 (93.8%)	1840 (94.1%)	1553 (94.2%)	1634 (94.5%)
Missing	27 (2.4%)	77 (2.2%)	70 (2.3%)	59 (2.3%)	51 (2.1%)	53 (2.4%)	42 (2.1%)	36 (2.2%)	34 (2.0%)
Index Child Age									
Adolescent (11-17 years)	370 (32.9%)	1268 (35.9%)	1034 (33.8%)	868 (34.3%)	962 (39.6%)	854 (37.9%)	769 (39.3%)	661 (40.1%)	707 (40.9%)
Child (4-10 years)	753 (67.1%)	2264 (64.1%)	2028 (66.2%)	1661 (65.7%)	1468 (60.4%)	1401 (62.1%)	1186 (60.7%)	988 (59.9%)	1022 (59.1%)
Index SEN/ND Status									
No SEN/ND	927 (82.5%)	2808 (79.5%)	2442 (79.8%)	1997 (79.0%)	1915 (78.8%)	1809 (80.2%)	1517 (77.6%)	1300 (78.8%)	1385 (80.1%)

<i>SEN/ND</i>	196 (17.5%)	609 (17.2%)	503 (16.4%)	410 (16.2%)	408 (16.8%)	348 (15.4%)	344 (17.6%)	275 (16.7%)	276 (16.0%)
<i>Missing</i>	0 (0%)	115 (3.3%)	117 (3.8%)	122 (4.8%)	107 (4.4%)	98 (4.3%)	94 (4.8%)	74 (4.5%)	68 (3.9%)
<i>Young Children in Household</i>									
<i>No younger children</i>	316 (28.1%)	1106 (31.3%)	890 (29.1%)	753 (29.8%)	815 (33.5%)	716 (31.8%)	658 (33.7%)	562 (34.1%)	595 (34.4%)
<i>Any younger children (aged 10 or less)</i>	807 (71.9%)	2426 (68.7%)	2172 (70.9%)	1776 (70.2%)	1615 (66.5%)	1539 (68.2%)	1297 (66.3%)	1087 (65.9%)	1134 (65.6%)