

***Supplementary Report 04: Pandemic-  
related worries over time, between  
keyworker and non-keyworker  
parent/carers, and households with  
and without a COVID case;  
Changes in household arguments over  
time;  
Changes in avoidance of COVID-19  
discussions with primary and  
secondary children;  
Parent-reported stressors***

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# The Co-SPACE Study

## Background

COVID-19 has caused major disruptions to families' lives, through social distancing, school closures and lock-down. This is also a rapidly changing situation where different pressures will arise for children, young people and their families over time. While research has provided valuable information about how parents can support their children's mental health in general, we know little about what is most effective in the current, changing context.

The Co-SPACE project is tracking the mental health of school-aged children and young people aged 4-16 years 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) 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 will be shared directly with health and education services to inform the development and provision of effective support for children and families.

## Recruitment & Sample

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, 92.6% of all participants who completed the questionnaire at baseline were female, presumably mothers. Furthermore, the majority of the baseline sample was employed, either part-time (35.8%) or full-time (36.9%), had an average income of >£30,000 (72.8%), and were white British (93.2%).

For the long-term, we are aiming to have good representation across a wide range of socio-demographic and health factors (e.g., income, ethnicity, pre-existing mental/physical health difficulties) to investigate the experiences for different groups that may be particularly vulnerable during and after the pandemic.

**We are 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>**

## Further information

For further information or to request specific analyses, please contact the research team at [co-space@psy.ox.ac.uk](mailto:co-space@psy.ox.ac.uk)

# *Focus of this report*

## *Participants*

To date, over 10,000 parents/carers and 1,000 adolescents have taken part in the Co-SPACE survey at baseline. Over 3,000 parents/carers have taken part in the first follow up survey so far and we continue to collect data at baseline and on a monthly basis.

Just under half of the participants who completed the baseline survey within the time window that we are currently looking at completed the survey again at follow up and completed all items on key measures reported here.

Parents/carers who completed the measure at follow up were more likely than those who did not to be female, working part time (as opposed to full time, self-employed or not working), have a higher than average household income, and be a parent of a primary school aged child, a child with a pre-existing mental health difficulties or a child without special educational needs (SEN). In addition, parents/carers who completed the follow up reported that their child had significantly fewer difficulties at baseline (as measured by the SDQ) than those who did not complete the follow up survey. In particular, parents/carers who did take part in the follow up reported significantly fewer difficulties at baseline with behaviour and restlessness/attention than those who did not take part. Further information about participants' characteristics at baseline and follow up can be found at the end of the report.

## *Data analysed*

This report provides data from 7,255 parents/carers who took part in the baseline questionnaire and 3383 parents/carers who completed the first follow up questionnaire. These participants completed<sup>1</sup> the baseline questionnaire between 30/03/2020 and 06/06/2020. Each participant completed the follow up questionnaire approximately one month after having completed their baseline questionnaires.

In this report, we examined the following questions:

1. Do pandemic-related worries (parent/carer and child) differ between keyworker and non-keyworker parent/carers?
2. Do parent/carer reports on their child's pandemic-related worries
  - a. Differ across the whole sample between baseline and 1-month follow up
  - b. Differ between households who have and have not had a COVID case
  - c. Change over time for primary and secondary school aged children between baseline and 1-month follow up

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<sup>1</sup> 'Completion' of the baseline survey is based on participants having completed items up to the pre-defined main outcome measure (the Strengths and Difficulties Questionnaire – parent reporting on child).

3. Have there been changes in the amount of arguments within the household from baseline to 1-month follow up?
  - a. Across the whole sample
  - b. Within primary and secondary school-aged children
4. Are there differences in the proportion of parents/carers of primary and secondary school-aged children who are avoiding discussing COVID with their children?
5. Have emotional, behavioural and restless/attentional difficulties changed over one month in lockdown?
  - a. Across the whole sample
  - b. Within primary and secondary school-aged children
6. Are there differences in the proportion of parents/carers who report being very stressed about particular areas of life?
  - a. Between parents/carers of primary and secondary school-aged children at baseline
  - b. Between baseline and 1-month follow up
  - c. Between baseline and 1-month follow up for parents/carers of primary and secondary school-aged children

Within each of the analyses reported, the effect of child age, gender, pre-existing mental health and physical health conditions, special educational needs, ethnicity, household income, and parent employment status were controlled for (except where otherwise stated). Asterisks are used to show whether analyses were statistically significant using the conventional cut off's for significance values, where one asterisk denotes that significance values fall below the accepted value for a statistically significant finding ( $p < .05$ ) and two and three asterisks show increasingly stringent values of statistical significance ( $p < .01$ ;  $p < .001$ ).

## ***Measurement of difficulties***

The report includes data from:

1. The Pandemic Anxiety Scale (PAS), which measures COVID-19 specific concerns. This scale consists of a "disease" subscale (e.g. "I am/my child is worried that I/they will catch COVID-19") consisting of 4 items, and "consequence" subscale (e.g. "I am/my child is worried about missing work/school") consisting of 3 items. The items are scored on a 4-point scale from "not at all" to "extremely" and items are totalled to create the subscales. The questionnaire is validated with excellent psychometric properties and there are versions for parent/carer's to report on their child's and their own anxiety. In addition to reporting on these subscales, this report also includes information on individuals concerns from the scale.
2. The Strengths & Difficulties Questionnaire (SDQ), which measures emotional, behavioural and restless/attentional difficulties. This is a well validated

questionnaire with excellent psychometric properties and there are versions for parents/carers and young people aged 11 and above to complete themselves.

- Emotional difficulties (emotional symptoms subscale): items relate to the child being worried, afraid, unhappy, clingy and having physical symptoms of anxiety (e.g. whether the child is “Often unhappy, down-hearted or tearful”, or has “many worries, often seems worried”).
- Behavioural difficulties (conduct problems subscale): items relate to the child doing what they are asked, having tantrums, fighting, lying or stealing things (e.g. whether the child “often lies, or cheats”, or is “generally obedient, usually does what adults request”).
- Restless/attentional difficulties (hyperactivity/inattention subscale): items relate to the child being restless, fidgety, distractible, impulsive and having a good attention span (e.g. whether the child “sees tasks through to the end, good attention span”, or is “restless, overactive, cannot stay still for long”).

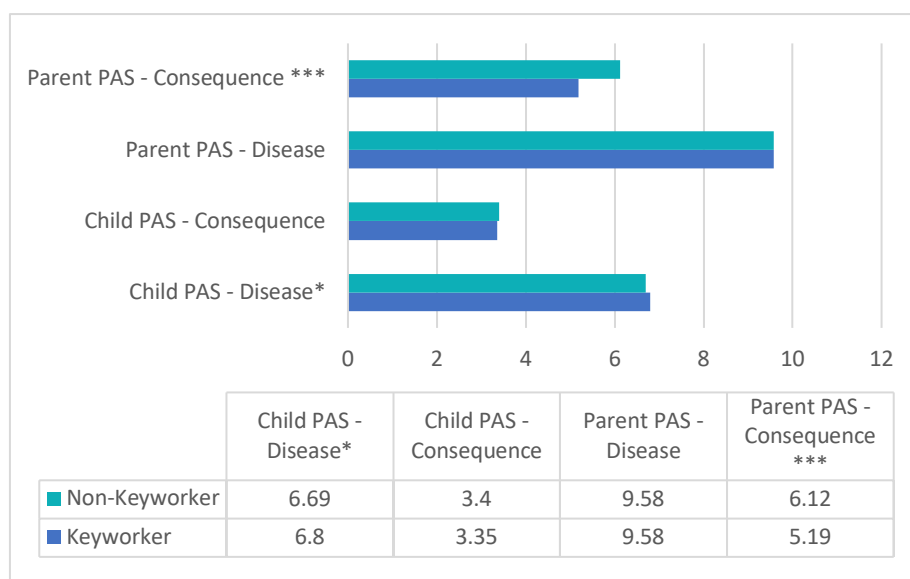
Each subscale consists of 5 items, are summed to compute a total score, with a maximum of 10 indicating the most severe difficulties.

3. Individual questions related to amount of arguments, discussion of COVID worries and stressors (further information on questions is provided within each section of the findings).

# Findings

## 1. Do pandemic-related worries differ between keyworker and non-keyworker parent/carers?

Figure 1. Pandemic Anxiety Scale score. (\*\*\*)  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ )



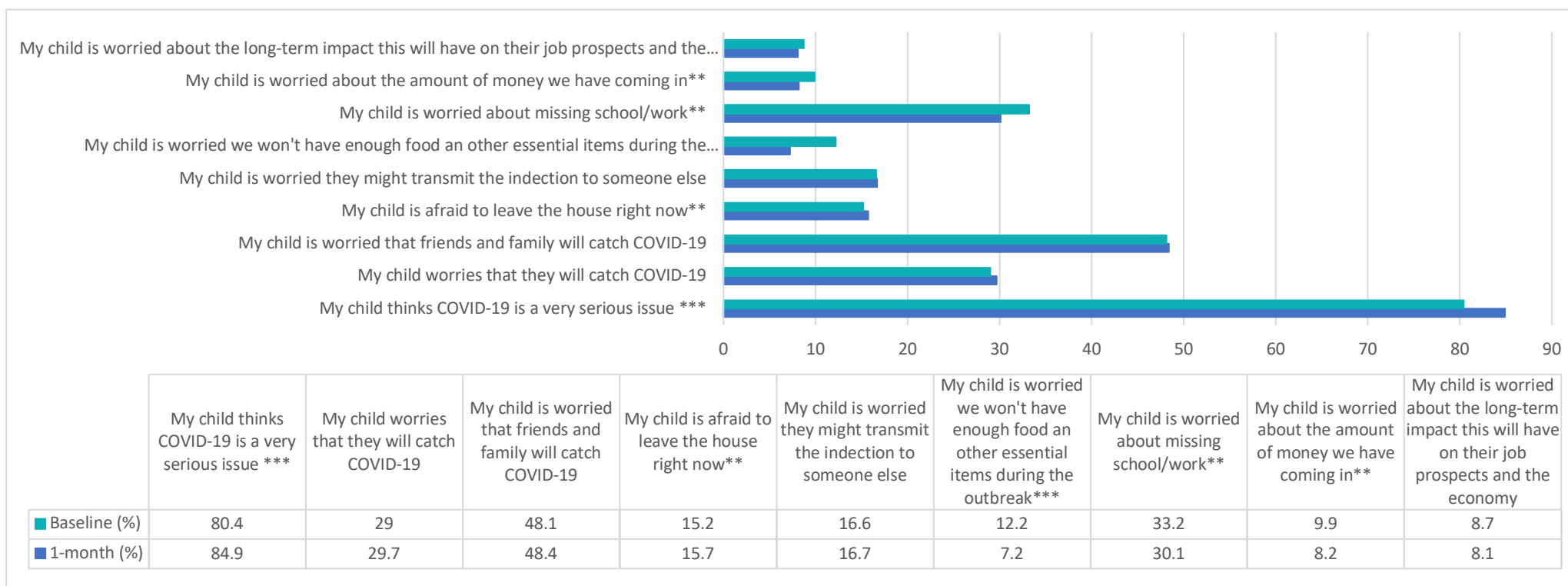
Parents/carers who are keyworkers are significantly less concerned about the *consequences* of COVID (e.g. the effect it has on money coming in, future jobs etc.) than parent/carers who are not key workers but there were no statistically significant differences in their own concerns about the *disease* aspects of COVID (e.g., catching or transmitting COVID).

Parents/carers who are keyworkers reported that their children are significantly more concerned about the *disease* aspects of COVID than children of non-keyworker parents/carers. Parent/carer reports on their children's concerns about the *consequences* of COVID did not differ between keyworker and non-keyworkers.

## 2. Parent/carer reports on their child's pandemic-related worries

### a) Change over time across the whole sample between baseline and 1-month follow up

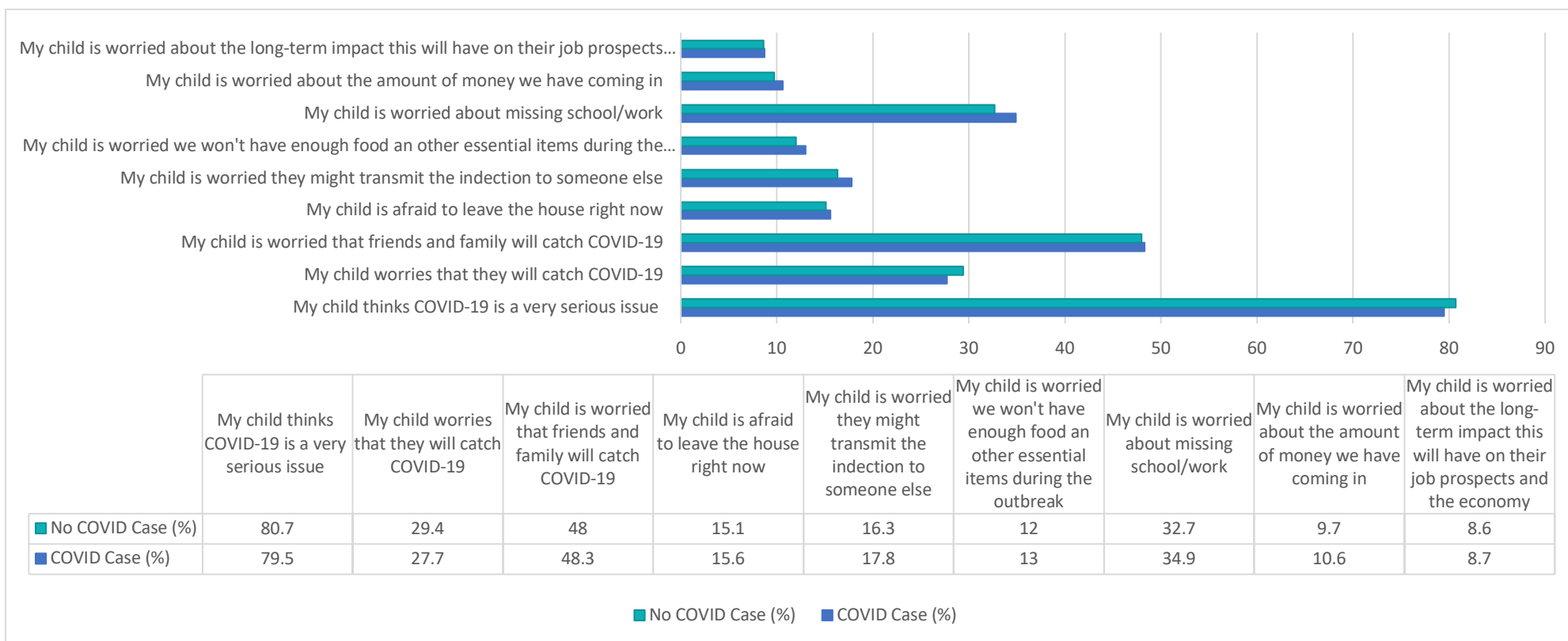
Figure 2. % of parent/carer reporting that their child is concerned “a lot” or “extremely” about specific aspects relating to the COVID-19 pandemic at baseline and 1-month follow up. (\*\*\*)  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ )<sup>2</sup>



<sup>2</sup> It was not possible to control for the effect of all variables in these analyses. As such, the effect of only child age, and pre-existing mental and physical health conditions were controlled for within these analyses. For the item “my child is worried that friends and family will catch COVID-19”, only child age and pre-existing mental health condition were controlled for.

## b) Differences between households who have and have not had a COVID case

Figure 3. % of parent/carer reporting that their child is concerned “a lot” or “extremely” about specific aspects relating to the COVID-19 pandemic between households who have and have not had a case of COVID-19. (\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ )

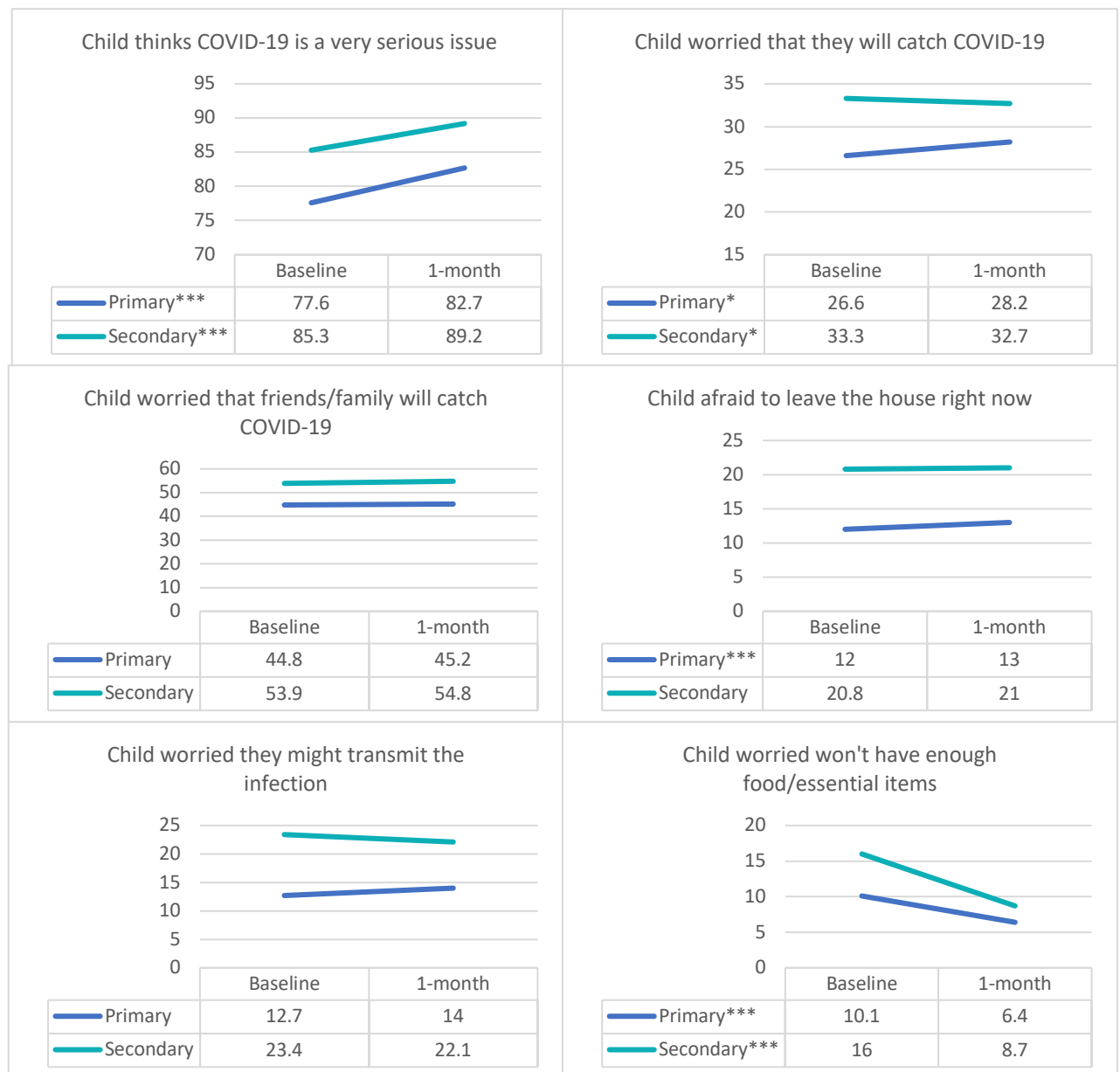


There were no significant differences in the child’s pandemic-related anxiety between households with and without a COVID case.



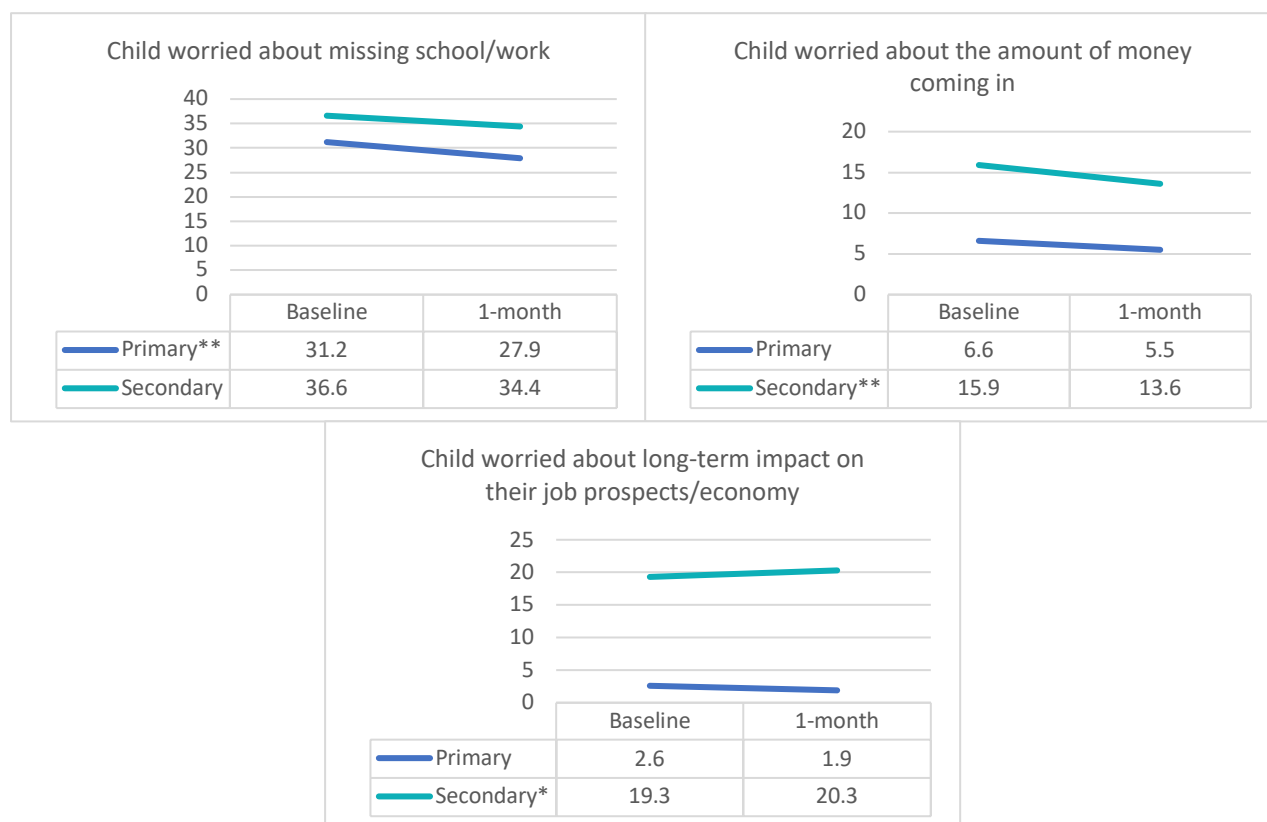
### C) Change over time for primary and secondary school aged children between baseline and 1-month follow up

Figure 4.1. % of parent/carer reporting that their child is concerned “a lot” or “extremely” about specific aspects relating to the COVID-19 pandemic at baseline and 1-month follow up for primary and secondary school aged children.<sup>3</sup> (\*\*\*)  $p < 0.001$ , \*\*  $p < 0.01$ , \* $p < 0.05$ )



<sup>3</sup>It was not possible to control for the effect of all variables in these analyses. As such, the effect of only pre-existing mental and physical health conditions were controlled for within these analyses.

Figure 4.2. % of parent/carer reporting that their child is concerned “a lot” or “extremely” about specific aspects relating to the COVID-19 pandemic at baseline and 1-month follow up for primary and secondary school aged children.<sup>4</sup> (\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \* $p < 0.05$ )

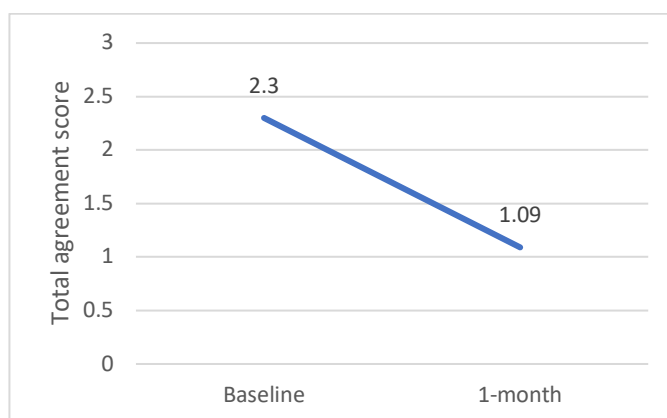


<sup>4</sup>It was not possible to control for the effect of all variables in these analyses. As such, within the analysis for primary school aged children, for the item “my child is worried about missing school work”, only pre-existing mental health condition were controlled for and for the item “my child is worried about the long term impact on their job prospects/the economy” no variables were controlled for.

### 3. Are there changes in the amount of arguments within the household between baseline and 1-month follow up?

#### a) Across the whole sample

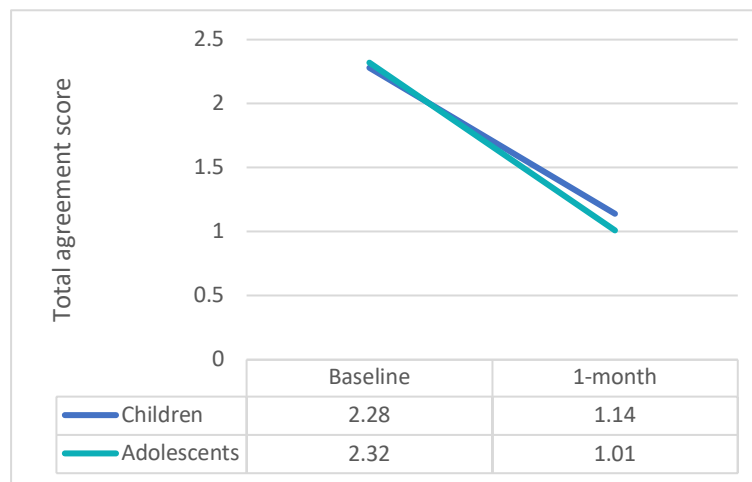
Figure 5. Parent/carer's agreement with statements indicating a lot of arguments are occurring within the household.



Parent/carers reported on whether they agreed with the statements “My child and I argue a lot”, “In my household, there are disagreements between adults about how to parent my child”, and “My child and their sibling(s) argue a lot”. Agreement was rated as “not at all” (0), “a bit” (1), “a lot” (2), or “extremely” (3) and these scores were totalled across the three statements. Parent/carers reported significantly less total agreement with the statements at 1-month than at baseline

## **b) Within primary and secondary school aged children**

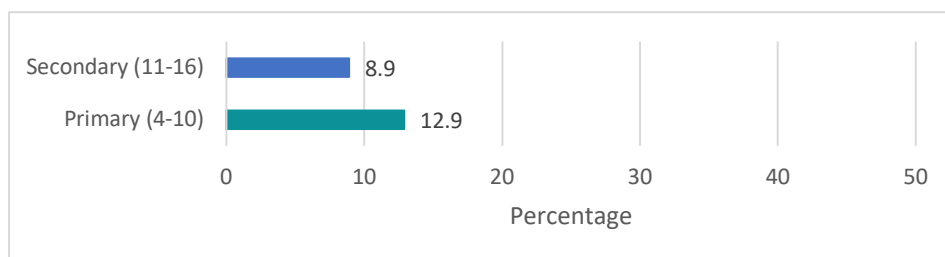
*Figure 6. Agreement of parent/carer's of primary and secondary school aged children with statements indicating a lot of arguments are occurring within the household*



Parent/carers of both primary and secondary school aged children reported significantly less total agreement with the statements (“My child and I argue a lot”, “In my household, there are disagreements between adults about how to parent my child”, and “My child and their sibling(s) argue a lot”) at 1-month than at baseline. This reduction was somewhat more pronounced for parent/carers of secondary than primary school aged children.

#### **4. Are there differences in the proportion of parents/carers of primary and secondary school children who are avoiding discussing COVID with their children?**

*Figure 7. % of parent/carer's of primary and secondary school aged children reporting that they are avoiding talking to their children about COVID-19.*

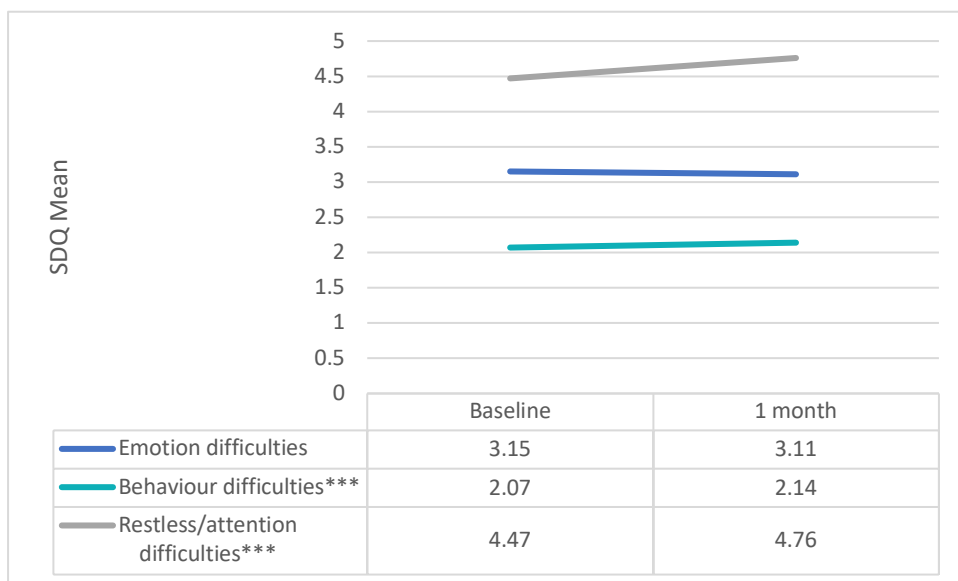


The majority of parents reported that they talk to their children about COVID-19. However, a significantly higher proportion of parent/carers of primary school aged children (aged 4-10 years old) compared to secondary school aged children (aged 11-16 years old) reported that they avoid speaking to their child about COVID-19.

## 5. Have emotional, behavioural and restless/attentional difficulties changed over one month in lockdown?

### a) Across the whole sample

Figure 8. Mean parent/carer reported emotional, behavioural and restless/attentional difficulties. (\*\* $p < 0.001$ , \*\*  $p < 0.01$ , \* $p < 0.05$ )



## b) Within primary and secondary school aged children

Figure 9. Mean parent/carer reported emotional, behavioural and restless/attentional difficulties amongst **primary school aged children**. (\*\*\*)  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ )

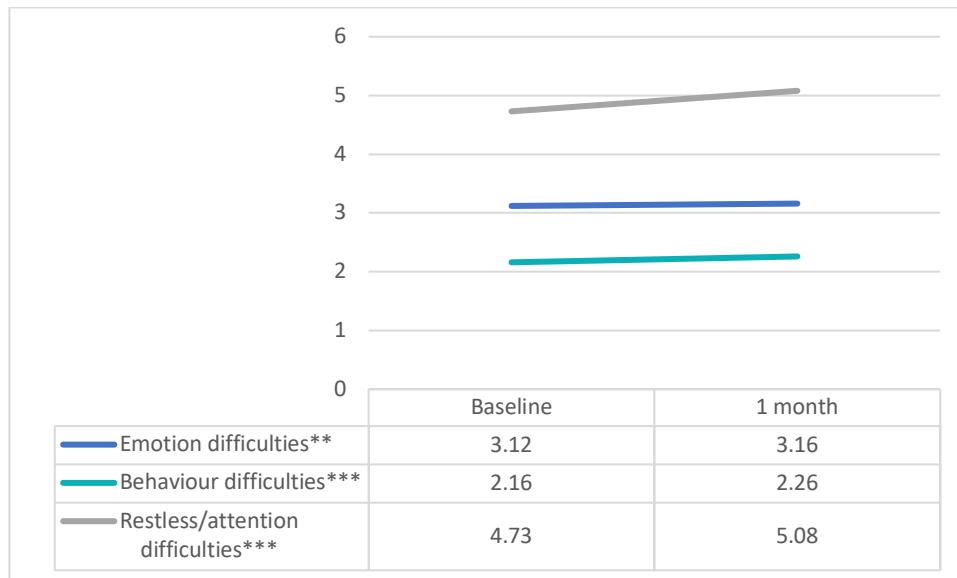
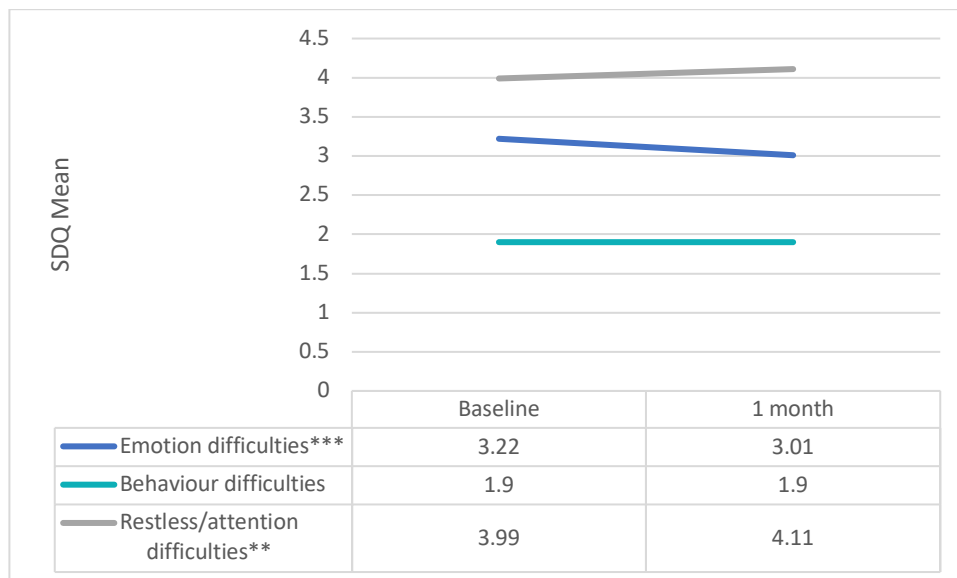


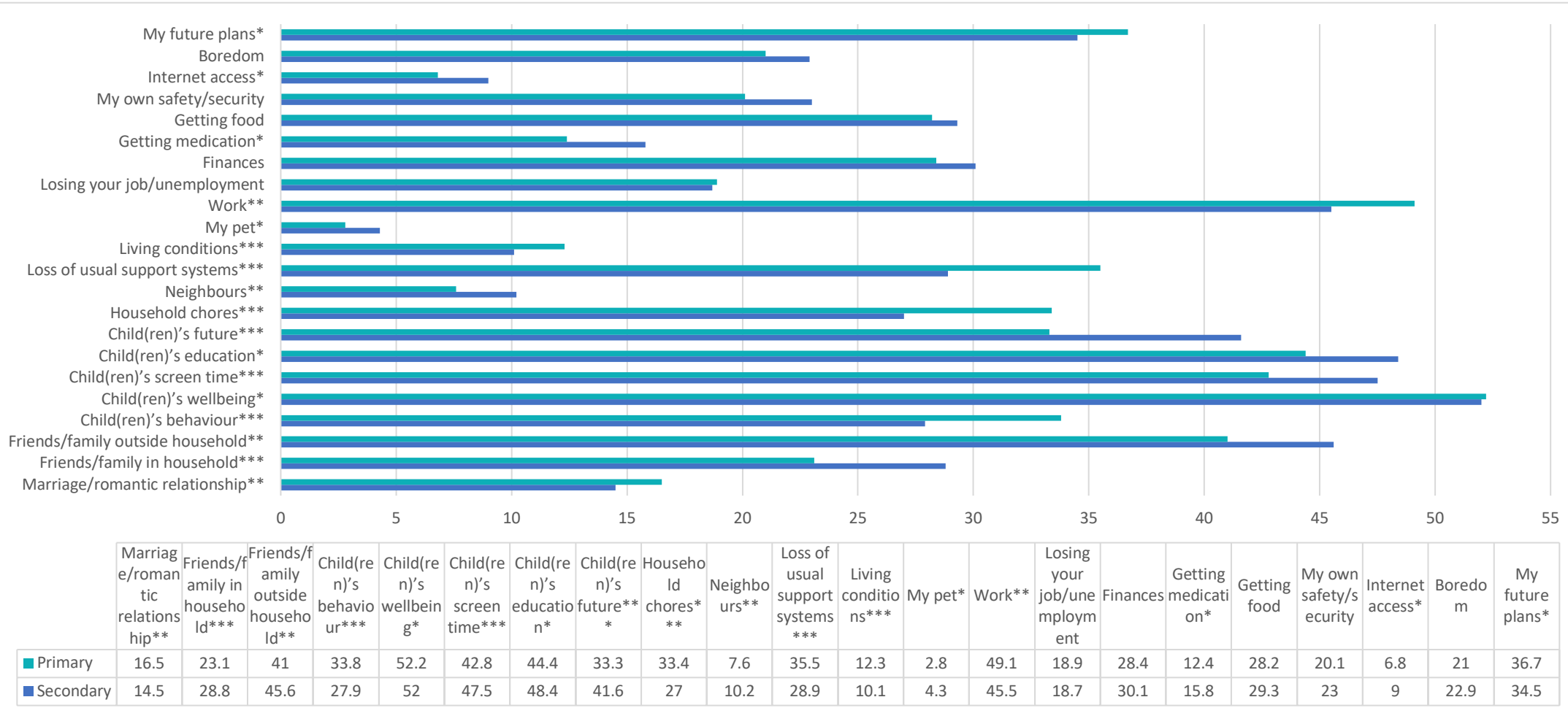
Figure 10. Mean parent/carer reported emotional, behavioural and restless/attentional difficulties amongst **secondary school aged children**. (\*\*\*)  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ )



## 6. Differences in parent/carer reported stressors

### a. Between primary/ secondary school age at baseline

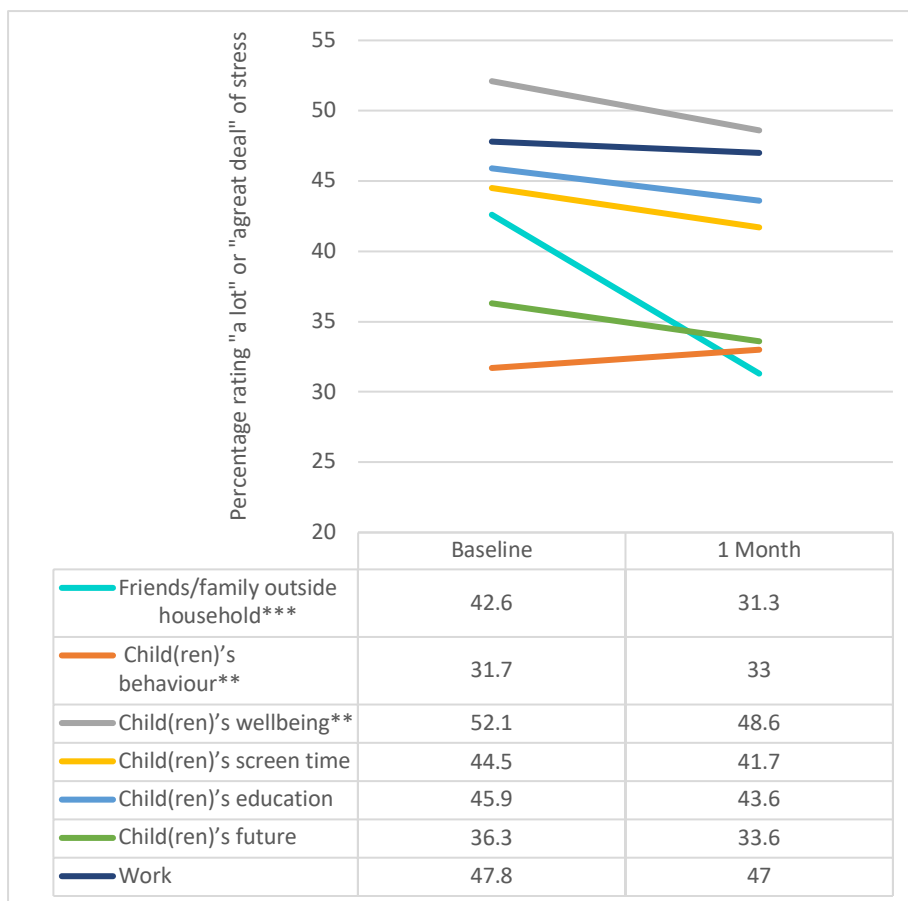
Figure 11. % of parent/carer's of primary and secondary school aged children reporting that they are stressed "quite a lot" or "a great deal" about particular areas of life at baseline (\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ )





## b. Between baseline and 1-month follow-up

Figure 12. Change in % of parent/carer's reporting that they are stressed "quite a lot" or "a great deal" about particular areas of life from baseline to 1-month follow up<sup>5</sup>  
(\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \* $p < 0.05$ )



The stressors reported here were reported as the top stressors by parents/carers at both baseline and 1 month follow up, with the addition of stress about child(ren)'s behaviour.

## c. From baseline to 1-month follow-up for parents/carers of primary and secondary school aged children.

<sup>5</sup> It was not possible to control for the effect of all variables in these analyses. As such, the effect of only child age, pre-existing mental and physical health conditions, and household income were controlled for within these analyses. For stress about child(ren)'s future, only child age and pre-existing mental health and physical health condition were controlled for

Figure 13. Change in % of parent/carer's of primary and secondary school aged children reporting that they are stressed "quite a lot" or "a great deal" about particular areas of life from baseline to 1-month follow up<sup>6</sup> (\*\* $p < 0.001$ , \*\*  $p < 0.01$ , \* $p < 0.05$ )



<sup>6</sup> It was not possible to control for the effect of all variables in these analyses. As such, the effect of only child age, pre-existing mental and physical health conditions, and household income were controlled for within these analyses. For stress about child(ren)'s screen time for parent/carers of secondary school aged children, only pre-existing mental health and physical health condition and gender were controlled for.

# Appendix A

## Participants' demographics (Whole sample)

		Baseline (ASD)		Completed follow up 1		Did not complete Follow up 1		National Figures (%)*
		n	%	n	%	n	%	
Parent Gender	Female	6715	92.6	3175	93.9	3540	91.4	51
	Male	504	6.9	193	5.7	311	8.0	49
	Other/Prefer not to say	36	0.5	15	0.4	21	0.5	-
Employment status	Not working	1189	16.4	519	15.3	670	17.3	3.8
	Working full time	2678	36.9	1183	35	1495	38.6	50.7
	Working part time	2599	35.8	1340	39.6	1259	32.5	16.9
	Self employed	789	10.9	341	10.1	448	11.6	8.5
Household income	< £30,000	1444	19.9	611	18.1	388	21.5	58
	> £30,000	5282	72.8	2527	74.7	2755	71.2	42
	Prefer not to say	529	7.3	245	7.2	284	7.3	-
Child Gender	Female	3494	48.2	1612	47.7	1882	48.6	52
	Male	3713	51.2	1745	51.6	1968	50.8	48

	Prefer not to say	48	0.7	26	0.8	22	0.6	-
Child age group	Child (4-10)	4647	64.1	2258	66.7	2389	61.7	55
	Adolescent (11-16)	2608	35.9	1125	33.3	1483	38.3	45
Mental health conditions	Any MH	1089	15	513	15.2	576	14.9	12.8
	Depression	58	0.8	28	0.8	30	0.8	2.1
	Anxiety	327	4.5	148	4.4	179	4.6	7.2
	Other	139	1.9	151	4.5	87	2.2	-
	ADHD	340	4.7	52	1.5	189	4.9	3-5
SEN	Any SEN	1213	16.7	559	16.5	654	16.9	14.7
	Social/emotional	804	11.1	386	11.4	418	10.8	2.1
	Communication/interaction	601	8.3	297	8.8	304	7.9	2,7
	Cognitive/learning	597	8.2	266	7.9	331	8.5	4.4
	Sensory/physical	553	7.6	256	7.6	297	7.7	0.6
Ethnicity	Asian/Asian British - Indian, Pakistani, Bangladeshi, other	140	1.9	35	1.0	105	2.7	6.8
	Black/Black British - Caribbean, African, other	39	0.5	11	0.3	28	0.7	3.3
	Chinese/Chinese British	13	0.2	3	0.1	10	0.3	0.7

	Middle Eastern/Middle Eastern British - Arab, Turkish, other	33	0.5	6	0.2	27	0.7	0.4
	Mixed race - other	104	1.4	29	1.2	65	1.7	11
	Mixed race - White and Black/Black British	40	0.6	16	0.5	24	0.6	1
	Other ethnic group	47	0.6	14	0.4	33	0.9	0.5
	Prefer not to say	74	1.0	25	0.7	49	1.3	-
	White - British, Irish, other	6765	93.2	3234	95.6	3531	91.2	86

\*This data was extracted from the following sources on 12/05/2020:

<https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017>

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/z1zippedpopulationprojectionsdatafilesuk>

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/employmentintheuk/september2019#:~:text=Main%20points%20for%20May%20to%20July%202019,and%20unchanged%20on%20the%20quarter.>

<https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/householddisposableincomeandinequality/yearending2018>

<https://www.gov.uk/government/collections/statistics-special-educational-needs-sen>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/814244/SEN\\_2019\\_Text.docx.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/814244/SEN_2019_Text.docx.pdf)

<https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/demographics/age-groups/latest#data-sources>