

C-SPYCE study

COVID-19: Supporting Parents and Young Children during Epidemics

Report 05: Parent/Carer mental health during lockdown

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The Co-SPYCE 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-SPYCE project is tracking the mental health of pre-school aged children throughout the COVID-19 crisis. This is through an online survey completed monthly by parents/carers throughout the pandemic. The study has full ethical and data protection approval and is fully GDPR compliant.

The findings will help identify what protects pre-school children 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 of effective support for young children and families.

Recruitment

The study sample has been recruited through a variety of means, including through social media, distribution through partner organisations, networks, charities and the media. The self-selecting nature of recruitment means that this will not be a nationally representative sample. See Appendix A for the demographic information.

For the long term, we are aiming to have good stratification across a wide range of socio-demographic 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: cospyce.org/survey

Further information

For further information or to request specific analyses, please contact the research team at cospyce@soton.ac.uk. The study is supported through UKRI Covid-19 funding and a UKRI Future Leaders Fellowship awarded to Helen Dodd.

Focus of this report

Participants

To date, over 3500 parents/carers have taken part in the Co-SPYCE survey at baseline. Roughly 1000 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.

Data analysed

This report provides cross-sectional data from 1949 parents/carers who completed the baseline questionnaire between 17/04/2020 and 31/05/2020.

In this report, we examined parent/carer mental health and wellbeing during lockdown and the relationship between child activities and parents' mental health.

This was examined for:

- A. Parent mental health and wellbeing.
 - 1. Proportion of parents with “normal”, “moderate” and “severe” DASS-21 subscale scores
 - 2. The correlation between parents' DASS-21 subscales and the wellbeing scale
 - 3. Demographic differences in DASS-21 subscales:
 - i. Parent gender
 - ii. Parent age
 - iii. Household income
 - iv. Parent ethnicity
 - v. Number of children
 - vi. Parent working status
- B. Association between parent/carer mental health and children's play
 - 1. The correlation between the DASS total score and parents/carers' perspective on children's play
 - 2. The relationship between parent mental health and child activities:
 - i. Spent time outside
 - ii. Take part in physical activity
 - iii. Playing outside
 - iv. Playing inside
 - v. Playing a screen-based game
 - vi. Doing art or craft activities
 - vii. Watching a screen
 - viii. Contact with nature

Measurement of difficulties

This report uses the Depression, Anxiety and Stress Scale - 21 Items (DASS-21) to measure the emotional states of depression, anxiety and stress in parents. It is a useful assessment of

disturbance. It is not a categorical measure of clinical diagnoses. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items.

This report also uses The Short Warwick-Edinburgh Mental Well-being Scale (S-WEMWBS), a scale of 7 positively worded items for assessing a population's mental wellbeing. The total score is obtained by summing the score for each of the 7 items. The scoring range for each item is from 1-5 and the total score is from 7-35. Higher scores are associated with higher levels of mental wellbeing. These are well-validated questionnaires with excellent psychometric properties.

Key findings

- **Parents from lower income households scored higher in the anxiety and depression DASS-21 subscales compared to parents from higher income households.**
- **Parents who stated that they were not currently employed scored higher on the anxiety and depression DASS-21 subscales.**
- **There is a moderate positive correlation between the DASS total score and parents' worries about not doing enough with their pre-school child ($r=0.41$, $p<.01$) as well as stressfulness about keeping their pre-school child occupied ($r=0.43$, $p<.01$).**
- **There is a weak negative correlation between the DASS total score and having ideas about ways to play with their pre-schooler ($r=-0.16$, $p<.01$).**
- **There is a moderate negative correlation between the DASS total score and keeping their pre-schooler occupied ($r=-0.3$, $p<.01$).**
- **There's no clear relationship between parent mental health and how their preschool-aged child was reported to spend their time.**

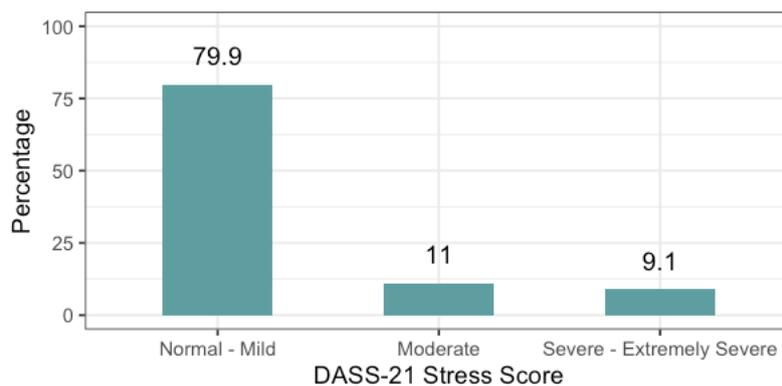
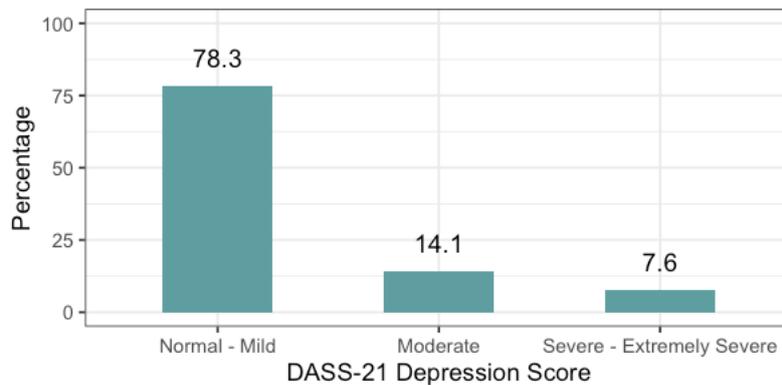
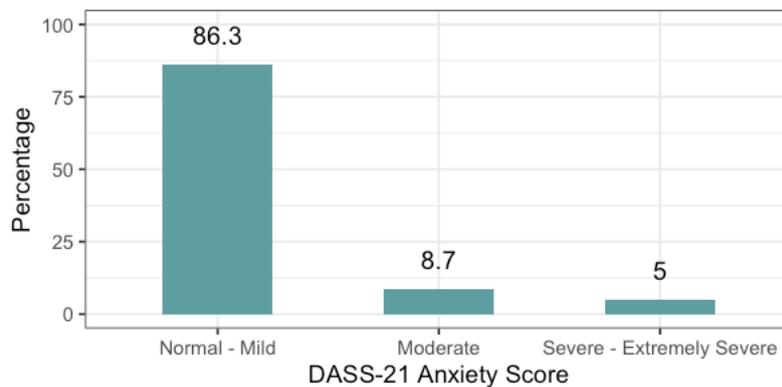
Findings

A. Parent mental health and wellbeing

1. Proportion of parents/carers with normal, moderate and severe DASS-21 scores

Note: The DASS-21 is well-validated and a useful assessment of disturbance. It is not a categorical measure of clinical diagnoses. Higher scores are associated with higher levels of negative emotional states.

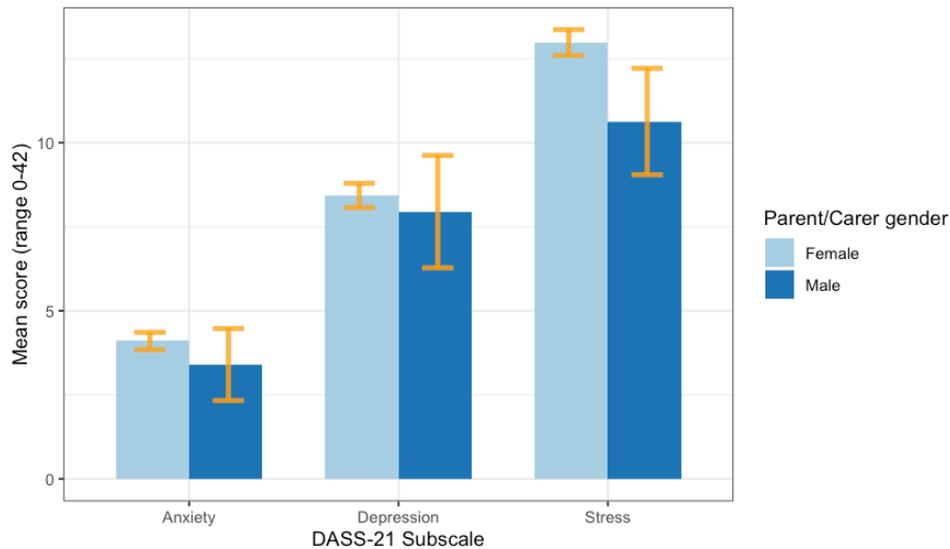
The majority of parents and carers had scores below a moderate level. For the anxiety subscale, 13.7% parents had a score of moderate to extremely severe. For both the depression and stress subscales, roughly 20% of parents/carers had a moderate to extremely severe score.



2. Demographic differences in DASS-21

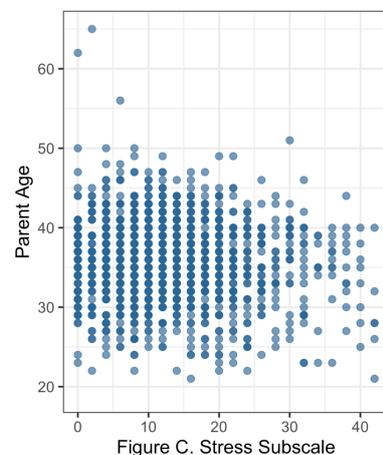
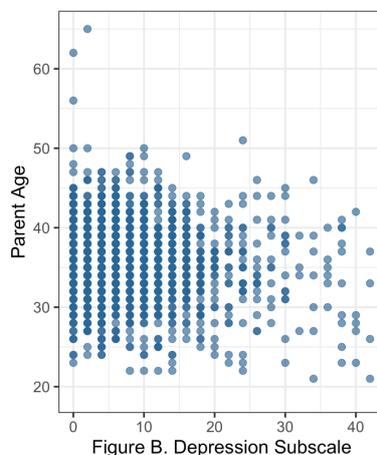
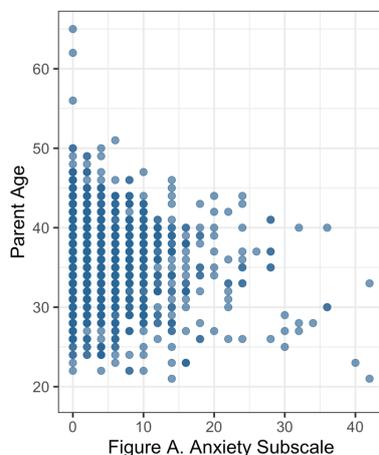
• Parent /Carer gender

Female and male parents/carers scored similarly on the depression and anxiety subscale. Female parents/carers, compared to males, scored significantly higher in the stress subscale, although the effect size is small ($d=0.3$). It is important to note that the majority of the sample were female (1844) and a minority were male (103).



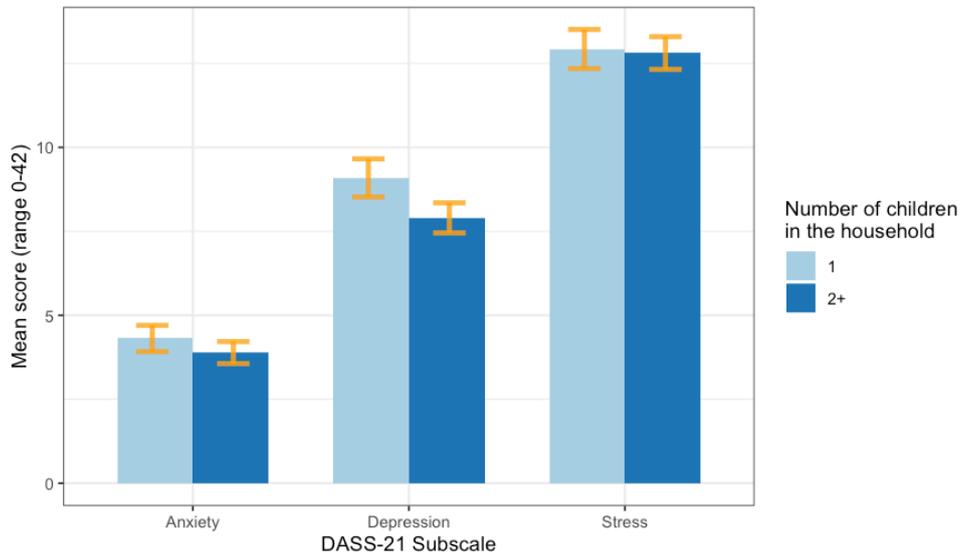
• Parent/Carer age

There was a weak negative relationship between parent age and the anxiety subscale score ($r = -0.14$, $p < .01$), as shown in Figure A. The same pattern is seen in Figure B between parent age and the depression subscale score ($r = -0.13$, $p < .01$). This means that younger parents / carers tended to report being more anxious and depressed than did older parents. There is no clear relationship between the stress score and parent age ($r = -.08$, $p < .01$).



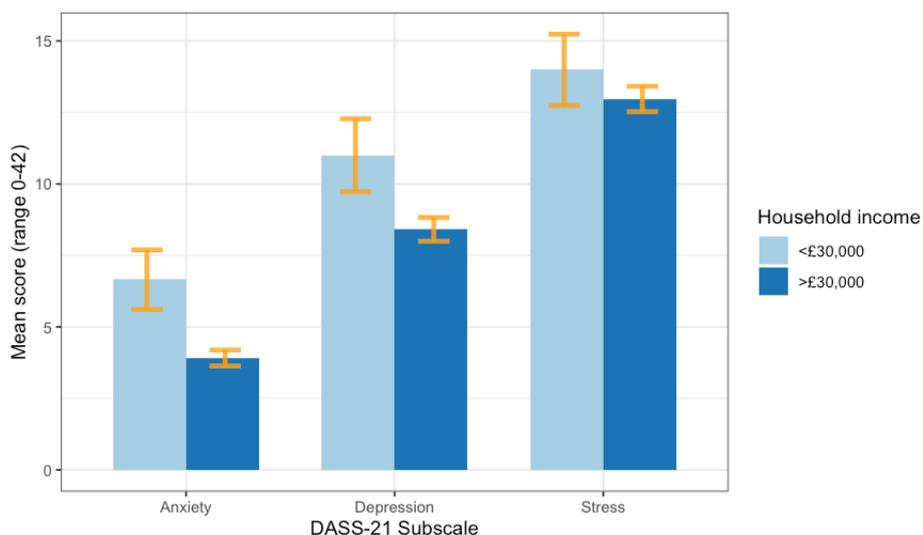
• Number of children in the same household

DASS-21 subscale scores were similar for parents/carers regardless of the number of children (aged 0-18) they have in the household. Parents/Carers with a single child scored higher in the depression subscale than those with more than one child. However, the effect size was small ($d=0.1$)



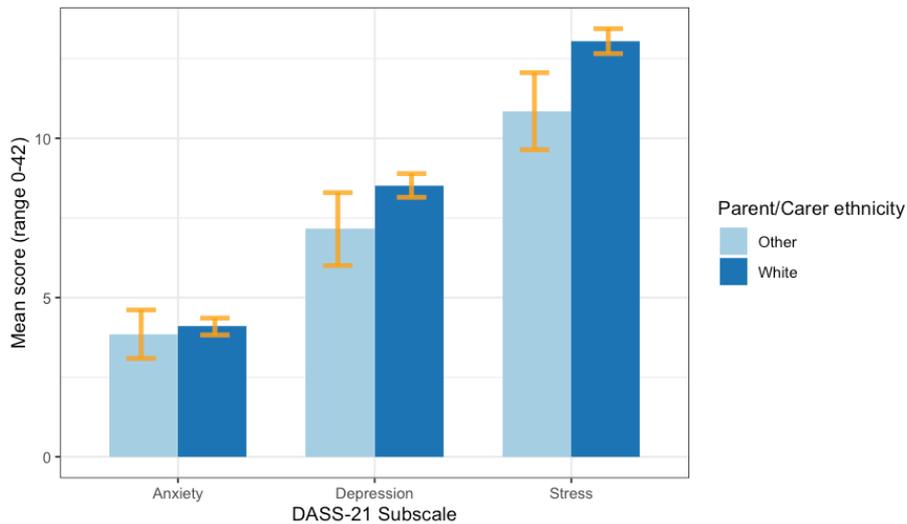
• Regular household income

Parents/Carers with a regular household income of $<£30,000$ consistently scored higher in the anxiety and depression DASS-21 subscales, compared to parents with a regular household income of $>£30,000$. The effect sizes were medium ($d=0.5$) and small ($d=0.3$), respectively. Parents/Carers scored similarly in the stress subscale regardless of household income.



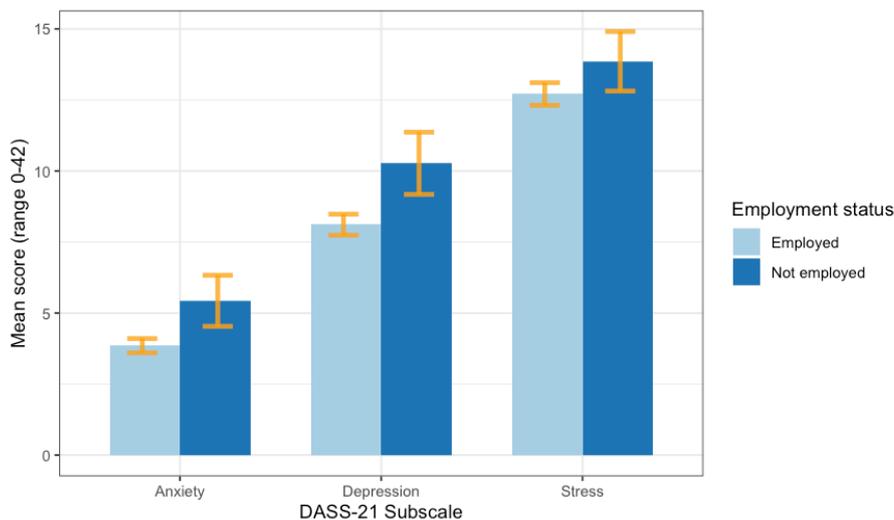
• Parent/Carer ethnicity

Approximately 10% of the parents/carers in the sample reported that their ethnicity was an ethnicity other than white British. Parents/carers of white British ethnicity scored significantly higher in the stress and depression subscale compared to other ethnicities. Effect sizes for both were small ($d=0.3$ and $d=0.2$ respectively). Scores for the anxiety subscale were similar across different ethnicities.



• Employment Status

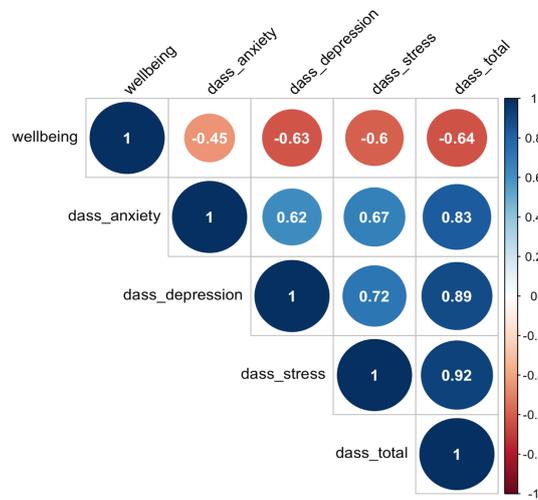
Approximately 18% of the parents/carers in the sample reported that they were not currently employed (including those who are homemakers/full time parents, in education, unable to work due to disability, seeking work, or retired). Parents/Carers who told us that they were not employed scored higher in the anxiety and depression subscales than parents / carers who told us they were employed. The effect sizes were small ($d=0.3$) for both comparisons.



3. Correlation between DASS-21 subscales and the wellbeing scale (S-WEMWBS)

Note: Higher scores on the DASS-21 are associated with higher levels of negative emotional states. In contrast, higher scores on the wellbeing scale (S-WEMWBS) are associated with higher levels of mental wellbeing.

The correlogram below illustrates the relationship between each DASS-21 Subscale (depression, anxiety and stress) and the wellbeing scale. The orange bubbles represent a negative relationship (as one decreases, the other increases) and the blue bubbles represent a positive relationship (as one increases, so does the other). There's a strong positive correlation between each DASS subscale and the total DASS score. There's a strong negative correlation between the DASS scores and the mental wellbeing scale.



B. Association between parent/carer mental health and children's play

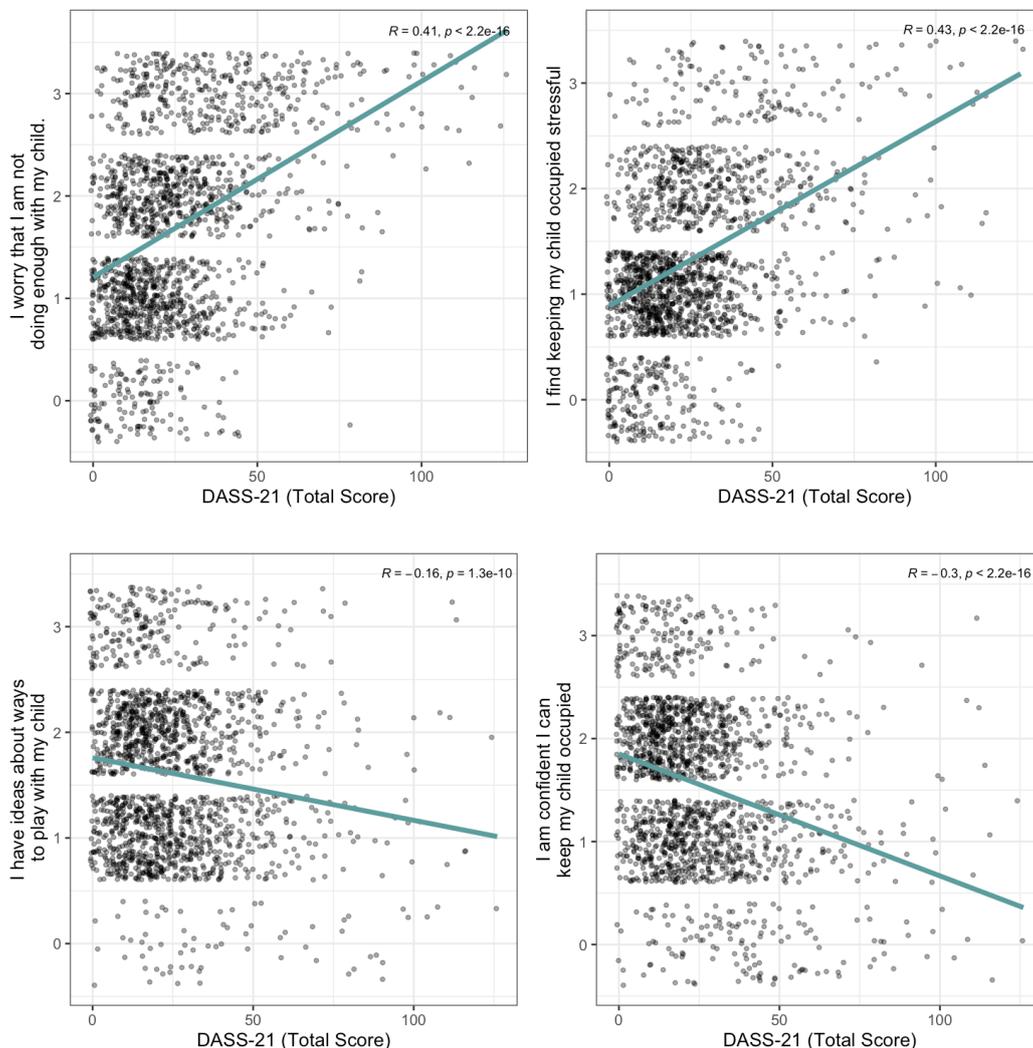
1. The correlation between the DASS-21 total score and parents' perspectives on children's play

Parents and carers were asked to what extent they agreed with the following statements about children's play: (1) I have lots of ideas about different ways to play with my child; (2) I am confident I can keep my child occupied; (3) I worry that I am not doing enough with my child; (4) I find keeping my child occupied stressful.

There is a moderate positive correlation between the DASS-21 total score and parents' / carers' worries for not doing enough with their pre-school child ($r=0.41$, $p<.01$), as well as stress about keeping their pre-school child occupied ($r=0.43$, $p<.01$). So, parents / carers who reported higher negative emotional states tended to report having more worries about playing with their children and keeping them occupied. On the other

hand, there was a weak negative correlation between the DASS-21 total score and having ideas about different ways to play ($r=-0.16$, $p<.01$) and a moderate negative correlation between the DASS-21 total score and having confidence about ways to keep their child occupied ($r=-0.3$, $p<.01$). So parents / carers who reported less negative emotional states tended to report having more ideas about ways to play with their children and more confidence in keeping their child occupied.

It is important to keep in mind that we do not know the direction of these effects or that there is a causal link. It is possible that parents who are experiencing more anxiety, depression and stress find it harder to have ideas about how to play with their child and how to keep their child occupied and that they then worry they aren't doing enough and experience stress about keeping them occupied. It is also possible that parents/carers who find it hard to have ideas about how to play with their child and keep them occupied, worry about doing enough and feel stress about keeping them occupied, which in turn increases their anxiety, depression and stress.



2. The relationship between parent/carer mental health and child activities

Parents/Carers were asked how much time their child spent, on average each day, engaging in a number of activities. There was no clear relationship between parent mental health and child activities, as shown below by the highlighted green row. Note that some of these correlations are statistically significant but the effect size means that they are negligible. The correlations show that as the amount of time children spent outside increased, so did their participation in physical activity, playing outside and that they had more contact with nature.

	Spent time outside	Take part in physical activity	Playing outside	Playing a screen-based game	Doing art or craft activities	Watching a screen	Contact with nature	DASS total
Spent time outside	1							
Take part in physical activity	0.27**	1						
Playing outside	0.62**	0.35**	1					
Playing a screen-based game	-0.06	-0.01	0.03**	1				
Doing art or craft activities	0.04*	0.12**	0.08**	0.05**	1			
Watching a screen	-0.02	0	-0.0	0.1**	0.02	1		
Contact with nature	0.41**	0.28**	0.44**	-0.06**	0.16**	0.01	1	
DASS total	-0.09**	-0.08**	0.08**	0.06**	-0.05**	0.08**	-0.02	1

* $p < .05$, ** $p < .001$ DASS = Depression, Anxiety and Stress Scale

Similarly, there was no clear relationship between child activities and how stressed or worried parents/carers felt, as shown below by the highlighted green row (below). This means that regardless of how much children were doing, some parents worry more, and others worry less.

	Spent time outside	Spent time exercising	Playing outside	Playing a screen-based game	Doing art or craft activities	Watching a screen	Contact with nature	Stressed about keeping occupied
Spent time outside	1							
Take part in physical activity	0.27**	1						
Playing outside	0.62**	0.35**	1					
Playing a screen-based game	-0.06	-0.01	0.03**	1				
Doing art or craft activities	0.04*	0.12**	0.08**	0.05**	1			
Watching a screen	-0.02	0	-0.0	0.1**	0.02	1		
Contact with nature	0.41**	0.28**	0.44**	-0.06**	0.16**	0.01	1	
Stressed about keeping child occupied	-0.07*	-0.09**	-0.1**	0.08**	-0.1**	0.12**	-0.07*	1
Worried about not doing enough	-0.07*	-0.06*	-0.1**	0.1**	-0.11**	0.11**	-0.09**	0.56**

* $p < .05$, ** $p < .001$

Appendix A

Demographic information

		Baseline
		n(%)
Parent Gender	Female	1844 (94.6%)
	Male	103 (5.3%)
	Other/Prefer not to say	2 (0.1%)
Employment status	Employed	1672 (85.8%)
	Not employed	277 (14.2%)
Household income	< £30,000	258 (13.2%)
	> £30,000	1323 (67.9%)
	Prefer not to say	137 (7.0%)
Child gender	Female	957 (49.1%)
	Male	986 (50.6%)
	Prefer not to say	6 (0.3%)
Neurodevelopmental conditions	ASD	28 (1.4%)
	ADHD	8 (0.4%)
SEN	Any SEN	62 (3.2%)
Parent ethnicity	BAME	178 (9.1%)
	White	1771 (90.9%)
		Mean (SD)
DASS-21 Score	Anxiety	4.07 (5.67)
	Depression	8.41 (7.97)
	Stress	12.9 (8.39)
S-WEMWBS score		22.6 (4.22)