



REACH

Resilience, Ethnicity, and AdolesCent Mental Health



Centre for
**Society and
Mental Health**

Young People, Covid-19, and Mental Health: The REACH Covid-19 Study (Part 1)

Appendix: Measures and Sample Characteristics

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Further information:

Please see: <https://www.thereachstudy.com/>

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Outline of Measures

Demographic information (T1 to T4)

Participants were asked to describe their ethnic group based on eighteen categories used in the 2011 ONS census (ONS, 2012)¹. We combined some smaller groups (e.g., Arab, Chinese) and used six ethnic groups in this analysis: black African; black Caribbean; white British; white non-British; mixed; other/unknown. Eligibility for free school meals, a marker of household income, was self-reported, as was gender.

Data collected of relevance to Covid-19 (T4 only)

In March and April 2020, an informal review of all emerging national and international Covid-19-related mental health research was undertaken to identify relevant measures for consideration to maximise data comparability.

Covid-19 infection: Three items on whether the participant, anyone in their household, or another family member had or was suspected of having Covid-19 [Co-SPACE]².

Housing: A 10-item version of the housing quality scale from Understanding Society³ to assess quality of living space (e.g., damp, rot); and items on access to private outdoor space (e.g., garden, balcony) [Co-SPACE]², own bedroom, own computer or tablet, and access to internet (Family Affluence Scale)⁴.

Economic impacts: 8 items derived from the Covid-19 Adolescent Symptom & Psychological Experience Questionnaire (CASPE)⁵

¹ Office for National Statistics, 2012. Ethnicity and National Identity in England and Wales: 2011. <https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/ethnicity/articles/ethnicityandnationalidentityinenglandandwales/2012-12-11>.

² Cresswell C. COVID-19: Supporting Parents, Adolescents and Children during Epidemics (The Co-SPACE Study). 2020.

³ Buck N, McFall S. Understanding Society: design overview. *Longitudinal and Life Course Studies* 2011; 3(1): 5-17.

⁴ Wardle J, Robb K, Johnson F. Assessing socioeconomic status in adolescents: the validity of a home affluence scale. *Journal of Epidemiology & Community Health* 2002; 56(8): 595-9.

⁵ Ladouceur C. COVID-19 Adolescent Symptom & Psychological Experience (CASPE) Questionnaire. 2020.

comprising: job loss of one parent; job loss of both parents; decrease in household income; difficulty paying rent, bills, or buying necessities; adult working longer hours; family applying for welfare benefits; first use of food bank; and family evicted or lost accommodation; 1 item from the Adolescent-appropriate Life Events Checklist^{6 7}, on self-reported financial problems in the past year.

Social relationships and supports: Items on perceived change in quality of relationships with family [CRISIS]⁸; frequency of arguments with parent(s)/carer(s); availability of peer and adult confidantes; and perceived loneliness.

Lifestyle and daily routine: Two items on sleep duration and difficulties sleeping [CRISIS]⁸; two items on number of days in the past week engaged in at least 30 minutes of moderate-to-vigorous physical activity (MVPA) [UCL Covid-19 Social Study]⁹ and change in MVPA due to pandemic [CRISIS]¹⁰; and an item on extent to which participants felt they had a stable daily routine in the last four weeks [The Pandemic Project]¹¹.

Worries, concerns, and positives: Twenty-five items on perceived pandemic-related worries, taken from the CASPE¹² and the UCL Covid-19 Social Study¹³, and revised following conversations with our Young Persons Advisory Group (YPAG). Similarly, fourteen items on perceived positive consequences of the pandemic in last 4 weeks were also included in the study, derived from the CASPE, and modified according to feedback from our YPAG.

⁶ Cullen AE, Fisher HL, Roberts RE, Pariante CM, Laurens KR. Daily stressors and negative life events in children at elevated risk of developing schizophrenia. *The British Journal of Psychiatry* 2014; 204(5): 354-60.

⁷ Heubeck B, O'Sullivan C. An exploration into the nature, frequency and impact of school hassles in the middle school years. *Australian Psychologist* 1998; 33(2): 130-7

⁸ Nikolaidis A, Paksarian D, Alexander L, et al. The Coronavirus Health and Impact Survey (CRISIS) reveals reproducible correlates of pandemic-related mood states across the Atlantic. medRxiv 2020: 2020.08.24.20181123.

⁹ Fancourt D, Bu F, Mak HW, Steptoe A. COVID-19 social study. Results release 2020; 15.

¹⁰ Nikolaidis A, Paksarian D, Alexander L, et al. The Coronavirus Health and Impact Survey (CRISIS) reveals reproducible correlates of pandemic-related mood states across the Atlantic. medRxiv 2020: 2020.08.24.20181123.

¹¹ Pennebaker JW. Pandemic Project. 2020.

¹² Ladouceur C. COVID-19 Adolescent Symptom & Psychological Experience (CASPE) Questionnaire. 2020.

¹³ Fancourt D, Bu F, Mak HW, Steptoe A. COVID-19 social study. Results release 2020; 15

Sample Characteristics

Table S1. Characteristics of participating young people mid-covid & comparison with full REACH cohort and target population

	Target population	REACH T1 (pre-covid) (n, 4353)		REACH T4 (mid-covid) (n, 1074)		REACH T4, weighted (mid-covid) (n, 1074)	
	%	n	%	n	%	n	%
Boys	50.5	2,138	49.1	349	32.5	488	45.4
Girls	49.5	2,215	50.9	725	67.5	586	54.6
No free school meals	74.8	3,137	76.3	792	74.8	779	72.6
Free school meals	25.2	976	23.7	267	25.2	295	27.4
Black African	27.2	1,113	25.6	281	26.4	279	26.0
Black Caribbean	14.0	719	16.5	101	9.5	146	13.6
Mixed	12.5	617	14.2	160	15.0	167	15.5
British white	16.4	667	15.3	228	21.4	180	16.7
Non-British white	10.8	626	14.4	105	9.9	113	10.5
Other	23.3	1243	28.6	190	17.8	190	17.7

Target population: KS3 pupils in Lambeth and Southwark. Lambeth and Southwark Key Stage 3 (KS3) demographics obtained, by application, from the National Pupil Database Spring 2017 School Census.

Calculation of Inverse Probability Weights: To account for potential non-response bias we calculated inverse probability weights, as follows: (1) we selected putative predictors of non-response a priori and by comparing those who completed the T4 questionnaire with those who did not on core variables; (2) we modelled selected predictors (i.e., school year, gender, ethnicity, free school meals, high SDQ score at T1, T2, and T3, and interaction terms for gender and high SDQ scores) using multi-level logistic regression, checking model fit using Hosmer-Lemeshow goodness of fit test (p for all tests were > 0.1); (3) we used predicted probabilities to calculate weights (i.e., weight = 1 / pr); (4) after checking the range and distribution of weights, we truncated weights at 10 to address potential issues with large weights. We applied inverse probability weights to all subsequent models. When applying inverse probability weights, the representativeness of the sample on core demographic variables and prior mental health problems was, broadly, restored, i.e. weighted proportions were broadly similar to the REACH total sample (see Table S1).



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