

Figure 1 Boxplots of total SDQ score for included children across all years, by deprivation (Glasgow SIMD) quintile, age group, gender and year. The width of each boxplot is proportional to the number of children in the corresponding category.

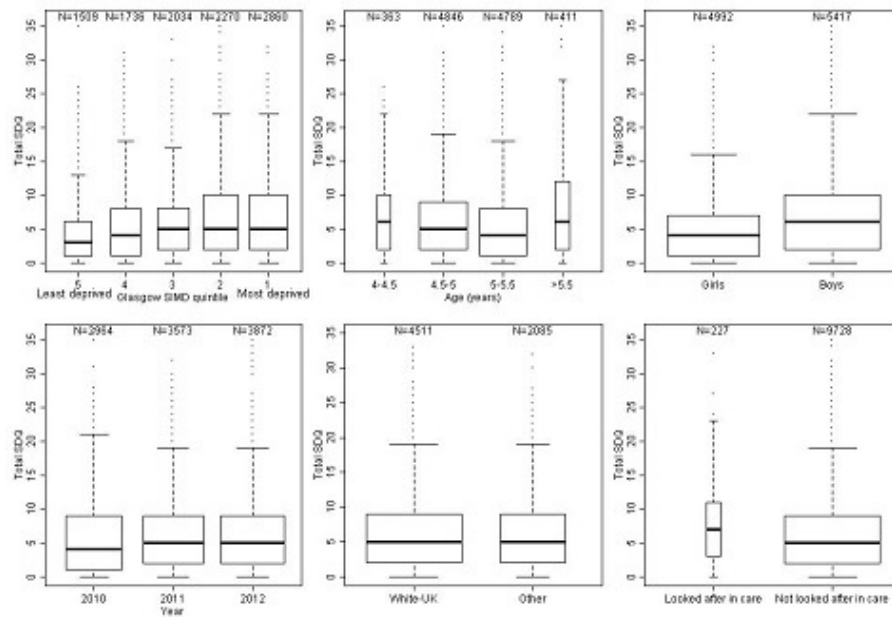


Figure 1 Median Glasgow SIMD quintile (upper plot) and median total SDQ score (lower plot) for each electoral ward

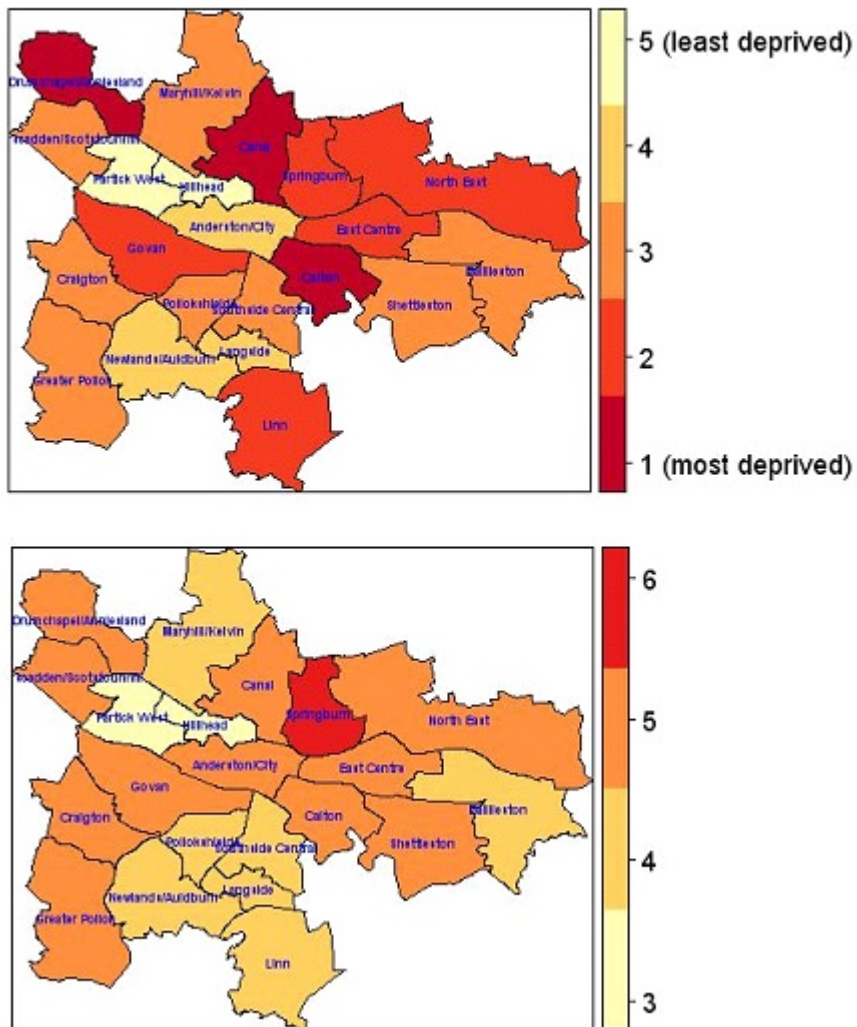


Figure 2 Map of Glasgow City split into electoral wards, with the colours representing the percentage of children living in each ward who had 'abnormal' SDQ score (total ≥ 16 ; conduct problems ≥ 4 , hyperactivity ≥ 7 , prosocial behaviour ≤ 4 , peer problems ≥ 5 , emotional symptoms ≥ 6)

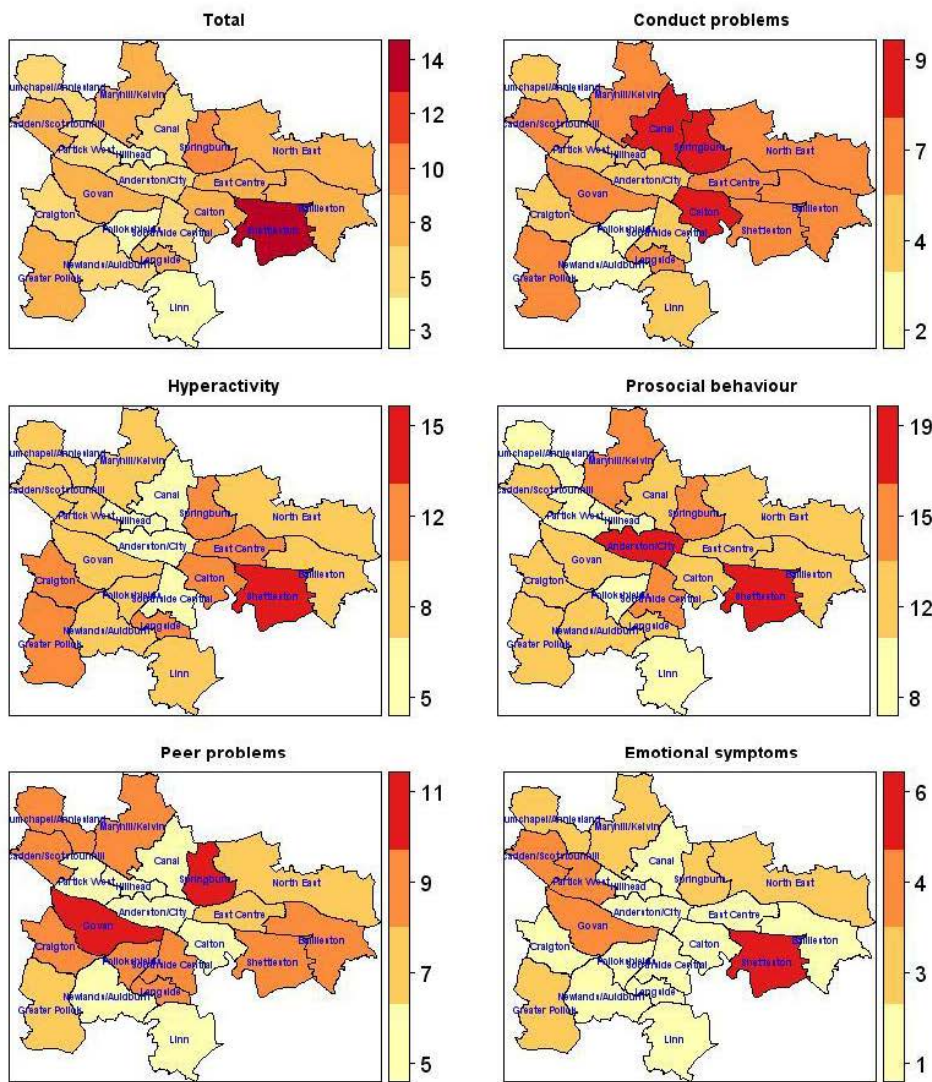


Figure 4 Unexplained variation in total SDQ across electoral wards in terms of mean ward-level model residuals, following adjustment for age group, gender, Glasgow SIMD quintile, year of primary school entry and pre-school establishment. 'Average score' means that on average the total SDQ score in the ward is as expected based on its demographics; while wards that are worse/better than average have worse/better SDQ scores than expected based on their covariates

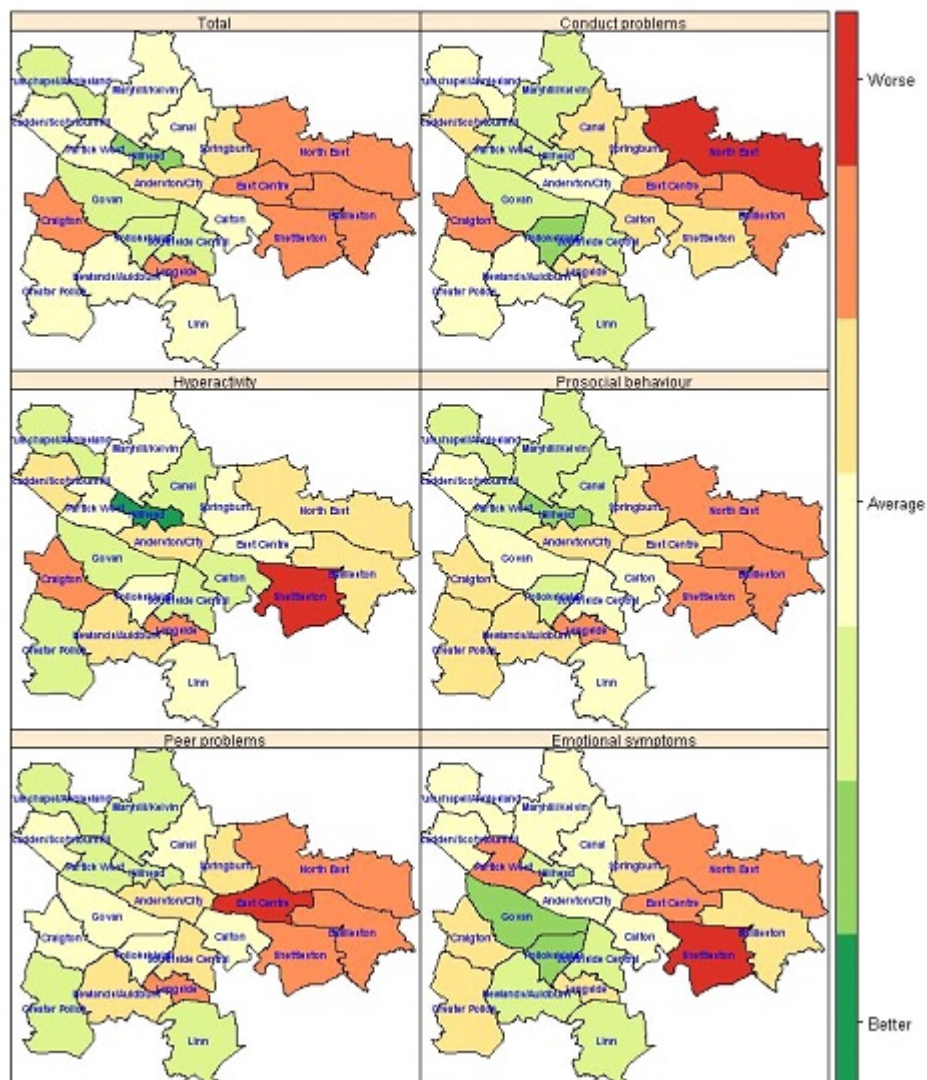
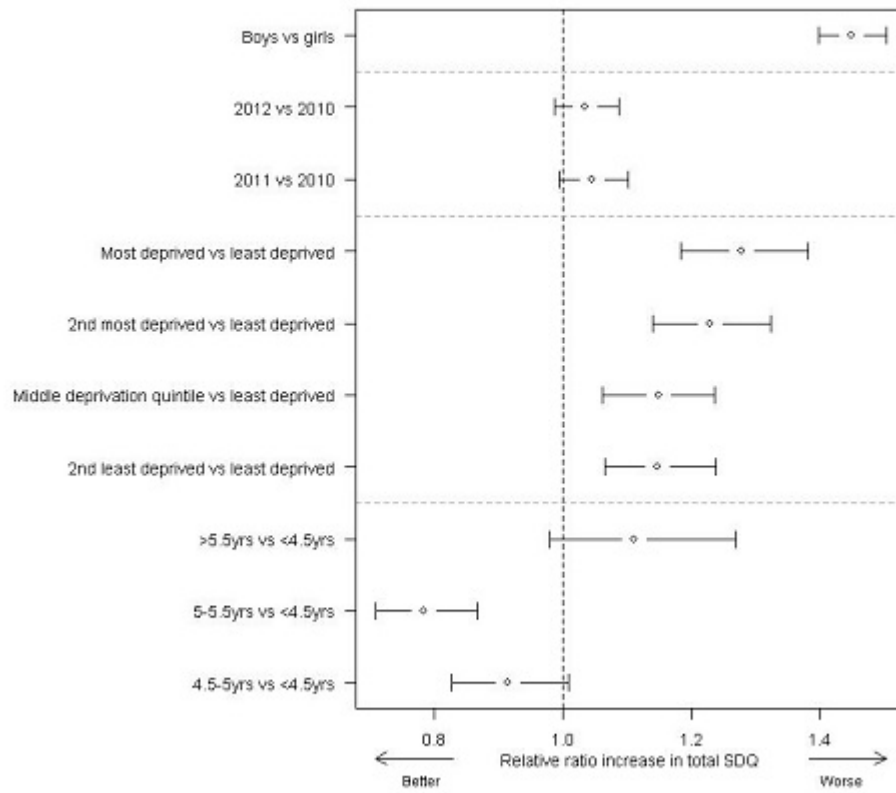


Figure 5 Effects estimates for the impact of individual and datazone level covariates on total SDQ



Web Table 1 Baseline characteristics (N (%)) of children excluded from the analysis, overall and by year of entry to primary school.

	All	2010	2011	2012
N	1078	368	559	151
Age missing	13	8	5	0
4-4.5	44 (4.1%)	21 (5.8%)	22 (4.0%)	1 (0.7%)
4.5-5	479 (45.0%)	167 (46.4%)	252 (45.3%)	60 (39.7%)
5-5.5	488 (45.8%)	157 (43.6%)	250 (45.1%)	81 (53.6%)
Age (years) >5.5	54 (5.1%)	15 (4.2%)	30 (5.4%)	9 (6.0%)
Gender missing	333	10	323	0
F	378 (50.7%)	190 (53.1%)	108 (45.8%)	80 (53.0%)
Gender M	367 (49.3%)	168 (46.9%)	128 (54.2%)	71 (47.0%)

	SIMD missing	931	361	419	151
5 (least deprived)	55 (37.4%)	0 (0.0%)	55 (39.3%)	0 (-)	
4	25 (17.0%)	2 (28.6%)	23 (16.4%)	0 (-)	
3	29 (19.7%)	3 (42.9%)	26 (18.6%)	0 (-)	
2	22 (15.0%)	0 (0.0%)	22 (15.7%)	0 (-)	
Glasgow SIMD quintile 1 (most deprived)	16 (10.9%)	2 (28.6%)	14 (10.0%)	0 (-)	
Ethnicity missing	751	273	441	37	
White-UK	236 (72.2%)	79 (83.2%)	85 (72.0%)	72 (63.2%)	
Ethnicity Other	91 (27.8%)	16 (16.8%)	33 (28.0%)	42 (36.8%)	
Under statutory parental supervision	393	0	393	0	
Statutory parental supervision missing	393	0	393	0	
Under statutory parental supervision	25 (3.6%)	14 (3.8%)	3 (1.8%)	8 (5.3%)	
Not under statutory parental supervision	660 (96.4%)	354 (96.2%)	163 (98.2%)	143 (94.7%)	

Web Table 2 Ward demographics, for all 3 years considered together. 'Locality weighting' is a standardised score representing the overall demographic distribution for the ward (dependent on age, gender, deprivation and under statutory parental supervision). The mean score is 0, while a negative score is represents fewer 'bad' characteristics than average, and a positive score represents more 'bad' characteristics than average. 'High deprivation' represents the percentage of datatozones in the ward that are in the most deprived two Glasgow SIMD quintiles (i.e. should be 40% on average) and 'outside normal age range' is defined as <4.5 or >5.5 years

Ward	Boys	Outside normal age range	High deprivation	Under statutory parental supervision	Locality weighting
Anderston City	51.3%	7.4%	29.5%	0.8%	-0.8
Baillieston	50.2%	6.2%	49.4%	2.8%	0.0
Calton	55.6%	5.0%	87.7%	3.0%	1.8
Canal	52.0%	8.7%	86.8%	2.0%	1.7
Craigton	47.4%	9.1%	29.4%	3.6%	-0.8
Drumchapel/Annisland	51.4%	7.0%	61.9%	2.4%	0.6
East Centre	54.0%	6.3%	65.1%	2.5%	0.8
Garscadden/Scotstounhill	52.4%	8.7%	43.1%	1.8%	-0.1
Govan	53.5%	5.9%	51.2%	2.2%	0.2
Greater Pollok	51.9%	6.1%	49.5%	2.8%	0.1
Hillhead	49.3%	12.8%	16.8%	2.5%	-1.1
Langside	50.7%	8.5%	0.0%	1.8%	-2.0
Linn	52.6%	7.3%	51.2%	2.5%	0.2
Maryhill/Kelvin	51.3%	10.0%	48.0%	2.0%	0.1
Newlands/Auldburn	49.4%	9.4%	38.0%	2.1%	-0.4
North East	50.3%	5.3%	73.9%	2.1%	1.0
Partick West	50.1%	7.8%	18.5%	0.8%	-1.3
Pollakshields	52.1%	8.9%	14.1%	1.4%	-1.4
Shettleston	57.2%	6.0%	49.7%	2.7%	0.3
Southside Central	55.4%	7.4%	46.2%	3.2%	0.2
Springburn	56.4%	4.5%	68.5%	2.0%	1.0
>-value	0.32	<0.01	<0.01	0.50	-