

Health inequalities among young people in England, Wales and Scotland: a cross-sectional study using data from the UK Censuses. Additional File 1.

Supplementary Table 1. Sample exclusions. 2001, 2011 and 2021 datasets, number of observations

	2001	2011	2021
Whole sample	2, 964, 871	2,848,149	3, 021, 455
Northern Ireland	85,380		
Sample limited to 10 to 24-year-olds	561, 697	618, 633	564, 502
Exclusions			
General health not applicable (not usually resident)	25, 492	33,549	31, 829
Deprivation measures NA	18,954	26, 760	27, 395
NS-SEC HRP NA	57,328	94	145
Total number of 10-24 year olds	459, 923	558,230	505, 133
Population base			
Usual residents	459,923 (100%)	539, 536 (96.7%)	504,060 (99.8%)
Short-term resident		18, 694 (3.3%)	
Non-UK-born short-term resident			1,073 (0.2%)

Supplementary Table 2. Study characteristics by self-reported health, 2001 (row percentages and p-value*<0.001)**

	2001 (n=459, 923)			
	Sample (N)	General Health (%)		
		Good	Fairly good	Not good
Whole sample	459,923	87.5	10.7	1.8
Gender***				
Male	231,962	89.3	9.1	1.6
Female	227,961	85.6	12.4	2.0
Age***				
10 to 15	218,230	91.2	7.8	1.0
16-19	121,092	86.7	11.5	1.8
20-24	120,601	81.5	15.4	3.1
NSSEC HH Ref person***				
Managerial and professional occupations	152,989	90.9	7.9	1.3
Intermediate occupations	34,480	87.8	10.6	1.6
Small employers/own account workers	53,127	89.9	8.9	1.2
Lower supervisory/technical occupations	51,566	87.5	10.9	1.6
Semi-routine/routine occupations	114,408	85.1	13.0	1.9
Never worked/long-term unemployed	19,042	79.4	16.8	3.9
Full-time students	4,876	84.2	13.5	2.3
Not classified (Only 2001 data)	29,435	80.3	15.7	4.1
HH deprived by education***				
Deprived	100,801	84.3	13.4	2.3
Not deprived	359,122	88.4	10.0	1.6
HH deprived by housing***				
Deprived	90,572	84.5	13.3	2.3
Not deprived	369,351	88.2	10.1	1.7
Region ***				
North and East of England	197,662	87.5	10.7	1.8
East and South of England	141,683	87.9	10.5	1.6
London	55,597	86.4	11.8	1.8
Wales	24,342	87.6	10.3	2.1
Glasgow	4,542	83.3	13.7	3.0
Other Scotland	36,097	87.8	10.3	1.9

Notes

NSSEC HH Ref person: National Statistics Socio-economic Position of the household reference person

Supplementary Table 3. Study characteristics by self-reported health, 2011 and 2021 (row percentages and p-value*<0.001)**

	2011 (n=558, 230)						2021 (n=505, 133) England and Wales					
	Sample (N)	General health (N)					Sample (N)	General health (%)				
	N	Very good	Good	Fair	Bad	Very bad	N	Very good	Good	Fair	Bad	Very bad
Whole sample	558, 230	71.0	24.6	3.5	0.7	0.2	505,133	70.7	23.6	4.6	1.0	0.2
Gender***												
Male	283,000	72.7	23.0	3.3	0.7	0.2	257,819	72.0	22.5	4.3	0.9	0.2
Female	275,230	69.2	26.2	3.7	0.7	0.2	247,314	69.3	24.7	4.8	1.0	0.2
Age***												
10 to 15	213,851	78.4	18.6	20.4	0.5	0.2	211,981	78.4	18.0	2.9	0.6	0.2
16 to 18	109,696	72.5	23.3	3.3	0.6	0.2	95,809	72.0	22.4	4.5	0.9	0.2
19 to 24	234,683	63.5	30.7	4.6	1.0	0.3	197,343	61.7	30.1	6.5	1.4	0.4
NSSEC HH Ref person***												
Managerial and professional occupations	177,704	77.8	19.3	2.3	0.5	0.1	177,176	77.0	19.0	3.2	0.6	0.2
Intermediate occupations	55,079	70.6	25.3	3.3	0.6	0.2	46,472	69.7	24.7	4.5	0.9	0.2
Small employers/own account workers	68,955	74.3	22.3	2.7	0.5	0.2	72,021	74.4	21.2	3.5	0.7	0.2
Lower supervisory/technical occupations	47,237	69.8	25.9	3.5	0.7	0.2	32,583	69.7	25.1	4.3	0.8	0.2
Semi-routine/routine occupations	140,245	65.2	29.0	4.6	1.0	0.3	121,110	65.2	27.5	5.8	1.2	0.3
Never worked/long-term unemployed	30,243	57.2	32.3	8.1	1.9	0.6	26,236	55.6	29.9	10.6	2.9	1.0
Full-time students	38,767	67.3	28.4	3.7	0.5	0.2	29,535	62.0	31.5	5.6	0.8	0.1
HH deprived by education***												
Deprived	76,391	61.5	30.8	5.9	1.4	0.4	40,015	63.1	27.5	7.1	1.7	0.6
Not deprived	481,839	72.5	23.6	3.1	0.6	0.2	465,118	71.3	23.2	4.4	0.9	0.2
HH deprived by housing***												
Deprived	108,806	65.9	28.7	4.3	0.9	0.3	107,566	67.7	25.9	5.1	1.1	0.3
Not deprived	449,424	72.2	23.6	3.3	0.7	0.2	397,567	71.5	22.9	4.4	0.9	0.2

Region ***												
North and East of England	233,788	70.1	25.3	3.6	0.7	0.3	227,674	70.0	24.0	4.7	1.0	0.3
East and South of England	172,850	71.2	24.6	3.4	0.7	0.2	172,791	71.0	23.3	4.6	0.9	0.2
London	76,367	68.6	26.8	3.7	0.7	0.3	78,623	71.7	23.2	4.1	0.8	0.2
Wales	28,300	72.3	22.8	3.8	0.8	0.3	26,045	71.4	22.5	4.8	1.1	0.2
Glasgow	5,935	73.1	21.8	4.0	1.0	0.2	-	-	-	-	-	-
Other Scotland	40,990	77.9	18.3	3.1	0.6	0.2	-	-	-	-	-	-

Supplementary Table 4. Odds of reporting poor health by the NSSEC of the household reference person. (p<0.001 **p<0.005 *p<0.05)**

	2001 (n= 459,923)		2011 (n=558, 230)		2021 (n=505,133)	
	OR (95% CI)		OR (95% CI)		OR (95% CI)	
NSSEC of the HRP (Model 1)						
Managerial and professional occupations	1		1		1	
Intermediate occupations	1.31***	(1.19-1.44)	1.43***	(1.36-1.51)	1.44***	(1.38-1.51)
Self-employed	0.99	(0.90-1.08)	1.17***	(1.11-1.23)	1.11***	(1.07-1.16)
Lower supervisory/technical occupations	1.27***	(1.16-1.37)	1.52***	(1.44-1.60)	1.34***	(1.27-1.42)
Semi-routine / routine occupations	1.54***	(1.45-1.64)	2.07***	(1.20-2.15)	1.92***	(1.86-1.98)
Never worked / long-term unemployed	3.20***	(2.94-3.49)	3.94***	(3.86-4.13)	4.12***	(3.95-4.30)
Full-time students	1.90***	(1.57-2.29)	1.52***	(1.44-1.61)	1.70***	(1.61-1.79)
Not classified (Only 2001)	3.36***	(3.12-3.61)	-	-	-	-
NSSEC age and sex adjusted (Model 2)						
Managerial and professional occupations	1		1		1	
Intermediate occupations	1.19***	(1.09-1.31)	1.37***	(1.30-1.44)	1.36***	(1.30-1.43)
Self-employed	0.99	(0.91-1.09)	1.17***	(1.11-1.23)	1.11***	(1.06-1.16)
Lower supervisory/technical occupations	1.19***	(1.10-1.30)	1.44***	(1.37-1.52)	1.28***	(1.21-1.35)
Semi-routine / routine occupations	1.45***	(1.36-1.54)	1.97***	(1.90-2.04)	1.82***	(1.76-1.88)
Never worked / long-term unemployed	3.17***	(2.91-3.46)	3.86***	(3.68-4.04)	3.97***	(3.81-4.14)
Full-time students	1.65***	(1.36-2.0)	1.18***	(1.11-1.25)	1.20***	(1.14-1.26)
Not classified (Only 2001)	3.52***	(3.27-3.79)	-	-	-	-
NSSEC Age, sex, deprivation and region adjusted (Model 5)						
Managerial and professional occupations	1		1		1	
Intermediate occupations	1.15**	(1.05-1.27)	1.31***	(1.25-1.38)	1.34***	(1.28-1.41)
Self-employed	0.94	(0.86-1.03)	1.10***	(1.05-1.16)	1.08***	(1.04-1.13)
Lower supervisory/technical occupations	1.11*	(1.02-1.21)	1.36***	(1.29-1.43)	1.24***	(1.18-1.31)
Semi-routine / routine occupations	1.29***	(1.21-1.37)	1.74***	(1.68-1.81)	1.72***	(1.66-1.78)
Never worked / long-term unemployed	2.66***	(2.43-2.92)	3.06***	(2.91-3.21)	3.55***	(3.39-3.71)
Full-time students	1.57***	(1.29-1.90)	1.13***	(1.07-1.20)	1.18***	(1.12-1.24)
Not classified (Only 2001)	3.07***	(2.84-3.31)	-	-	-	-

Supplementary Table 5. Sensitivity analysis. Odds of reporting poor health by the NS-SEC of the household reference person*. Gender stratified analysis (*p<0.001 **p<0.005 *p<0.05)**

2001 Census dataset	Girls n=227,961			Boys n=231, 962		
	OR	(95% CI)		OR	(95% CI)	
Ref: Managerial and professional occupations	1			1		
Intermediate occupations	1.23	(1.08-1.39)	**	1.05	(0.90-1.22)	
Self-employed	0.88	(0.77-0.99)	*	1.02	(0.90-1.16)	
Lower-supervisory/technical occupations	1.19	(1.07-1.33)	**	1.01	(0.89-1.15)	
Semi-routine/routine occupations	1.30	(1.19-1.42)	***	1.27	(1.15-1.40)	***
Never worked/long-term unemployed	2.47	(2.19-2.79)	***	3.00	(2.60-3.45)	***
Full-time students	1.39	(1.07-1.80)	*	1.86	(1.40-2.48)	***
Other (only 2001)	2.80	(2.51-3.12)	***	3.34	(2.99-3.73)	***
2011 census dataset	Girls n=275,230			Boys n=283,000		
Ref: Managerial and professional occupations	1			1		
Intermediate occupations	1.30	(1.21-1.39)	***	1.32	(1.22-1.42)	***
Self-employed	1.06	(0.99-1.14)		1.15	(1.07-1.24)	***
Lower-supervisory/technical occupations	1.32	(1.23-1.43)	***	1.40	(1.29-1.51)	***
Semi-routine/routine occupations	1.67	(1.58-1.75)	***	1.82	(1.72-1.92)	***
Never worked/long-term unemployed	2.68	(2.50-2.87)	***	3.54	(3.30-3.79)	***
Full-time students	0.99	(0.92-1.08)		1.30	(1.20-1.41)	***
2021 census dataset	Girls n=247,314			Boys n=257,819		
Ref: Managerial and professional occupations	1			1		
Intermediate occupations	1.35	(1.27-1.44)	***	1.33	(1.24-1.43)	***
Self-employed	1.07	(1.01-1.14)	*	1.10	(1.03-1.17)	**
Lower-supervisory/technical occupations	1.17	(1.08-1.26)	***	1.33	(1.23-1.44)	***
Semi-routine/routine occupations	1.63	(1.55-1.70)	***	1.83	(1.74-1.92)	***
Never worked/long-term unemployed	3.14	(2.94-3.34)	***	4.03	(3.78-4.29)	***
Full-time students	1.09	(1.02-1.18)	*	1.28	(1.18-1.39)	***

*Models adjusted for age, household-level deprivation of housing and education, and region