

Supplementary file 11. Pupils' nutrient and food intakes on a school day: at lunch, during the school day, and during 24-hours: associations with school type (6-group typology) – full models

Table 1. Outcome: Free sugar intake

Coefficient	Free sugar (g) Lunch	Free sugar (g) School day	Free sugar (g) 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	-0.80 (-4.05-2.46) p = 0.631	2.46 (-2.77-7.69) p = 0.357	2.60 (-7.82-13.01) p = 0.625
SFS/SFP Type: 2 B	-4.91 (-11.98-2.16) p = 0.173	0.91 (-10.74-12.57) p = 0.878	16.12 (-7.62-39.86) p = 0.183
SFS/SFP Type: 3 A	-1.19 (-4.50-2.12) p = 0.481	-0.06 (-5.48-5.35) p = 0.981	-2.41 (-13.23-8.42) p = 0.663
SFS/SFP Type: 3 B	2.76 (-0.31-5.82) p = 0.078	4.77 (-0.23-9.77) p = 0.062	5.41 (-4.62-15.45) p = 0.290
SFS/SFP Type: 4 A	0.89 (-4.40-6.17) p = 0.742	0.84 (-7.79-9.46) p = 0.849	2.76 (-14.48-20.01) p = 0.754
Sex: Male	-0.35 (-2.16-1.47) p = 0.709	0.38 (-2.41-3.17) p = 0.789	4.18 (-1.26-9.63) p = 0.132
Sex: Other	0.50 (-4.50-5.50) p = 0.844	-0.24 (-7.91-7.43) p = 0.951	-12.58 (-27.18-2.02) p = 0.091
Age	-1.52 (-4.08-1.04) p = 0.245	0.55 (-3.37-4.48) p = 0.783	1.33 (-6.30-8.96) p = 0.732
Ethnicity: Asian/Asian British	-1.21 (-3.67-1.25) p = 0.335	-4.05 (-7.87- -0.23) p = 0.038	-12.18 (-19.67- -4.69) p = 0.001
Ethnicity: Black/African/Caribbean/Black British	2.07 (-1.97-6.10) p = 0.315	7.40 (1.16-13.64) p = 0.020	4.33 (-7.70-16.36) p = 0.480
Ethnicity: Mixed/Multiple	-2.90 (-6.67-0.86) p = 0.131	-4.27 (-10.06-1.52) p = 0.148	-11.75 (-23.09- -0.41) p = 0.042
Ethnicity: Other	2.62 (-2.31-7.55) p = 0.298	5.22 (-2.23-12.66) p = 0.170	3.95 (-10.30-18.20) p = 0.587
IMD Quintile: 2	2.51 (-0.33-5.35) p = 0.084	2.62 (-1.74-6.98) p = 0.240	3.66 (-4.79-12.12) p = 0.396
IMD Quintile: 3	1.84 (-1.07-4.75) p = 0.215	2.04 (-2.47-6.55) p = 0.375	2.72 (-6.05-11.48) p = 0.544
IMD Quintile: 4	1.43 (-1.65-4.52) p = 0.363	-0.03 (-4.81-4.74) p = 0.989	2.95 (-6.36-12.26) p = 0.535
IMD Quintile: 5	0.88 (-2.22-3.99) p = 0.577	1.01 (-3.81-5.83) p = 0.682	2.29 (-7.14-11.72) p = 0.634
Source of Lunch: 100% School Provided	-3.61 (-5.26- -1.96) p < .001	-2.18 (-4.70-0.34) p = 0.090	3.30 (-1.45-8.04) p = 0.174
Percent FSM	0.09 (-0.04-0.21) p = 0.172	-0.03 (-0.23-0.17) p = 0.791	0.09 (-0.31-0.49) p = 0.651
School Level IDACI	0.10 (-0.02-0.22) p = 0.115	0.29 (0.09-0.49) p = 0.005	0.37 (-0.04-0.77) p = 0.074
Sixth Form: Yes	-2.02 (-4.53-0.49) p = 0.114	0.03 (-4.08-4.15) p = 0.987	-0.91 (-9.25-7.43) p = 0.831
Provision: External	0.75 (-1.33-2.82) p = 0.479	1.04 (-2.31-4.40) p = 0.542	2.60 (-4.10-9.31) p = 0.446
Religious: Secular	3.66 (-0.35-7.67) p = 0.073	5.45 (-1.14-12.04) p = 0.105	7.59 (-5.68-20.86) p = 0.262
Year collected: 2020/2021	-1.32 (-5.11-2.48) p = 0.496	0.44 (-5.76-6.64) p = 0.889	-4.17 (-16.64-8.30) p = 0.512
Year collected: 2021/2022	0.05 (-2.07-2.17) p = 0.963	0.99 (-2.44-4.42) p = 0.572	-0.23 (-7.06-6.60) p = 0.947
Year: 9	1.82 (-3.69-7.34) p = 0.517	-3.83 (-12.26-4.61) p = 0.374	-3.88 (-20.32-12.57) p = 0.644
Year: 10	2.39 (-5.59-10.36) p = 0.558	-6.27 (-18.49-5.95) p = 0.315	-7.22 (-30.95-16.50) p = 0.551

Table 2. Outcome: Percentage Total Energy Intake (TEI) from free sugar

Coefficient	%TEI from free sugar Lunch	%TEI from free sugar School day	%TEI from free sugar 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	0.44 (-2.30-3.17) p = 0.754	0.16 (-2.56-2.89) p = 0.906	-0.26 (-2.46-1.94) p = 0.817
SFS/SFP Type: 2 B	-8.46 (-14.62- -2.31) p = 0.007	-5.39 (-11.65-0.88) p = 0.092	1.19 (-4.02-6.41) p = 0.653
SFS/SFP Type: 3 A	-0.26 (-3.09-2.58) p = 0.859	0.56 (-2.31-3.42) p = 0.704	-0.41 (-2.74-1.92) p = 0.732
SFS/SFP Type: 3 B	2.20 (-0.39-4.79) p = 0.096	1.87 (-0.73-4.48) p = 0.159	0.59 (-1.54-2.71) p = 0.588
SFS/SFP Type: 4 A	-3.45 (-8.08-1.17) p = 0.143	-2.57 (-7.24-2.10) p = 0.281	-0.83 (-4.69-3.04) p = 0.675
Sex: Male	-1.70 (-3.00- -0.40) p = 0.010	-1.36 (-2.57- -0.15) p = 0.027	-0.64 (-1.48-0.21) p = 0.142
Sex: Other	0.31 (-3.23-3.84) p = 0.865	0.11 (-3.18-3.39) p = 0.950	-1.39 (-3.64-0.86) p = 0.225
Age	-1.22 (-3.07-0.64) p = 0.198	-0.53 (-2.25-1.19) p = 0.549	-0.08 (-1.30-1.13) p = 0.895
Ethnicity: Asian/Asian British	0.21 (-1.56-1.98) p = 0.815	-0.10 (-1.77-1.56) p = 0.903	-1.67 (-2.86- -0.49) p = 0.006
Ethnicity: Black/African/Caribbean/Black British	0.67 (-2.21-3.55) p = 0.650	4.14 (1.44-6.83) p = 0.003	0.18 (-1.69-2.05) p = 0.852
Ethnicity: Mixed/Multiple	-0.83 (-3.50-1.84) p = 0.542	1.37 (-1.11-3.85) p = 0.279	-1.21 (-2.96-0.54) p = 0.174
Ethnicity: Other	-1.95 (-5.46-1.56) p = 0.276	-1.78 (-4.99-1.43) p = 0.276	-0.82 (-3.03-1.38) p = 0.465
IMD Quintile: 2	-0.77 (-2.80-1.26) p = 0.455	0.10 (-1.79-1.98) p = 0.920	-0.24 (-1.56-1.07) p = 0.718
IMD Quintile: 3	-0.02 (-2.12-2.08) p = 0.985	0.83 (-1.14-2.79) p = 0.409	0.12 (-1.26-1.50) p = 0.861
IMD Quintile: 4	-0.35 (-2.57-1.87) p = 0.758	0.33 (-1.75-2.41) p = 0.756	0.49 (-0.97-1.95) p = 0.512
IMD Quintile: 5	-1.34 (-3.57-0.90) p = 0.242	-0.03 (-2.13-2.07) p = 0.978	-0.81 (-2.30-0.68) p = 0.286
Source of Lunch: 100% School Provided	0.76 (-0.44-1.96) p = 0.213	0.02 (-1.10-1.13) p = 0.979	0.22 (-0.54-0.97) p = 0.573
Percent FSM	0.05 (-0.06-0.15) p = 0.390	0.06 (-0.05-0.16) p = 0.294	0.04 (-0.05-0.12) p = 0.404
School Level IDACI	0.07 (-0.04-0.17) p = 0.194	0.10 (-0.007-0.20) p = 0.067	0.04 (-0.04-0.13) p = 0.321
Sixth Form: Yes	-0.69 (-2.84-1.46) p = 0.528	-0.49 (-2.66-1.69) p = 0.662	-0.09 (-1.88-1.71) p = 0.925
Provision: External	0.37 (-1.38-2.12) p = 0.681	0.31 (-1.44-2.07) p = 0.726	0.10 (-1.32-1.52) p = 0.893
Religious: Secular	0.91 (-2.58-4.40) p = 0.608	1.16 (-2.38-4.70) p = 0.521	1.09 (-1.83-4.00) p = 0.465
Year collected: 2020/2021	1.69 (-1.55-4.92) p = 0.307	2.00 (-1.27-5.27) p = 0.232	0.69 (-2.00-3.38) p = 0.615
Year collected: 2021/2022	1.59 (-0.19-3.37) p = 0.080	1.04 (-0.74-2.83) p = 0.251	0.79 (-0.65-2.23) p = 0.283
Year: 9	2.23 (-1.74-6.20) p = 0.271	1.08 (-2.60-4.76) p = 0.564	-0.07 (-2.67-2.53) p = 0.961
Year: 10	2.45 (-3.30-8.20) p = 0.403	0.04 (-5.30-5.38) p = 0.989	-0.99 (-4.76-2.77) p = 0.604

Table 3. Outcome: Total Energy Intake (TEI)

Coefficient	TEI (kcal Lunch)	TEI (kcal) School day	TEI (kcal) 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	-34.74 (-96.63-27.14) p = 0.271	31.80 (-42.31-105.90) p = 0.400	105.12 (-51.63-261.87) p = 0.189
SFS/SFP Type: 2 B	24.78 (-113.60-163.15) p = 0.726	-19.55 (-182.81-143.71) p = 0.814	149.65 (-209.46-508.75) p = 0.414
SFS/SFP Type: 3 A	-38.61 (-102.52-25.30) p = 0.236	-4.33 (-80.68-72.02) p = 0.912	-48.76 (-212.12-114.60) p = 0.559
SFS/SFP Type: 3 B	7.22 (-51.31-65.75) p = 0.809	53.76 (-17.04-124.57) p = 0.137	64.89 (-86.11-215.88) p = 0.400
SFS/SFP Type: 4 A	37.76 (-65.91-141.43) p = 0.475	84.15 (-36.32-204.62) p = 0.171	140.00 (-121.92-401.91) p = 0.295
Sex: Male	41.05 (10.59-71.52) p = 0.008	63.36 (21.70-105.03) p = 0.003	209.17 (130.19-288.14) p < .001
Sex: Other	15.76 (-67.48-98.99) p = 0.711	-7.43 (-122.42-107.57) p = 0.899	-181.55 (-392.93-29.83) p = 0.092
Age	18.20 (-25.16-61.57) p = 0.411	42.03 (-16.35-100.40) p = 0.158	60.31 (-50.74-171.36) p = 0.287
Ethnicity: Asian/Asian British	6.26 (-35.36-47.87) p = 0.768	-16.70 (-73.61-40.21) p = 0.565	-2.81 (-111.67-106.04) p = 0.960
Ethnicity: Black/African/Caribbean/Black British	50.21 (-17.35-117.77) p = 0.145	60.45 (-32.89-153.78) p = 0.204	111.15 (-63.36-285.66) p = 0.212
Ethnicity: Mixed/Multiple	-48.19 (-110.94-14.56) p = 0.132	-105.55 (-192.32- -18.77) p = 0.017	-78.94 (-243.19-85.30) p = 0.346
Ethnicity: Other	182.57 (100.28-264.85) p < .001	219.41 (107.85-330.97) p < .001	146.82 (-59.87-353.51) p = 0.164
IMD Quintile: 2	56.36 (8.79-103.92) p = 0.020	42.47 (-22.73-107.66) p = 0.202	51.92 (-70.76-174.60) p = 0.407
IMD Quintile: 3	45.92 (-3.18-95.03) p = 0.067	26.47 (-40.80-93.75) p = 0.441	18.49 (-108.93-145.91) p = 0.776
IMD Quintile: 4	47.48 (-4.55-99.52) p = 0.074	56.27 (-14.91-127.45) p = 0.121	77.32 (-57.95-212.58) p = 0.263
IMD Quintile: 5	58.16 (5.74-110.58) p = 0.030	54.37 (-17.41-126.15) p = 0.138	100.72 (-36.44-237.89) p = 0.150
Source of Lunch: 100% School Provided	-134.16 (-161.95- -106.36) p < .001	-70.99 (-108.57- -33.42) p < .001	5.06 (-64.64-74.75) p = 0.887
Percent FSM	-0.54 (-2.89-1.82) p = 0.656	-1.50 (-4.38-1.38) p = 0.307	-3.26 (-9.25-2.73) p = 0.286
School Level IDACI	1.42 (-0.94-3.79) p = 0.238	2.81 (-0.03-5.64) p = 0.052	5.36 (-0.68-11.39) p = 0.082
Sixth Form: Yes	-49.59 (-98.09- -1.08) p = 0.045	-2.75 (-60.75-55.25) p = 0.926	-4.69 (-130.39-121.00) p = 0.942
Provision: External	-2.74 (-42.28-36.80) p = 0.892	31.82 (-15.75-79.40) p = 0.190	14.97 (-85.96-115.89) p = 0.771
Religious: Secular	83.65 (5.34-161.97) p = 0.036	95.47 (3.18-187.77) p = 0.043	129.51 (-71.45-330.47) p = 0.207
Year collected: 2020/2021	-62.79 (-135.97-10.39) p = 0.093	-13.78 (-101.17-73.61) p = 0.757	-68.43 (-256.38-119.51) p = 0.475
Year collected: 2021/2022	-48.21 (-88.45- -7.98) p = 0.019	-54.54 (-103.24- -5.83) p = 0.028	-86.26 (-188.99-16.47) p = 0.100
Year: 9	-80.21 (-173.28-12.86) p = 0.091	-143.04 (-268.71- -17.37) p = 0.026	-143.48 (-382.66-95.69) p = 0.240
Year: 10	-82.22 (-217.00-52.56) p = 0.232	-156.87 (-338.81-25.06) p = 0.091	-160.69 (-505.80-184.43) p = 0.361

Table 4. Outcome: Fat intake

Coefficient	Fat intake (g) Lunch	Fat intake (g) School day	Fat intake (g) 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	-0.62 (-3.41-2.16) p = 0.660	2.37 (-1.12-5.87) p = 0.184	5.10 (-1.26-11.45) p = 0.116
SFS/SFP Type: 2 B	2.71 (-3.37-8.79) p = 0.382	-0.33 (-8.03-7.36) p = 0.932	6.81 (-7.48-21.10) p = 0.350
SFS/SFP Type: 3 A	-2.16 (-5.00-0.68) p = 0.136	-0.91 (-4.51-2.70) p = 0.622	-4.18 (-10.74-2.39) p = 0.212
SFS/SFP Type: 3 B	0.57 (-2.05-3.19) p = 0.670	2.19 (-1.15-5.52) p = 0.199	1.97 (-4.14-8.07) p = 0.528
SFS/SFP Type: 4 A	1.32 (-3.24-5.89) p = 0.570	4.43 (-1.26-10.12) p = 0.127	5.30 (-5.08-15.68) p = 0.317
Sex: Male	1.54 (0.04-3.03) p = 0.044	2.43 (0.47-4.40) p = 0.015	7.25 (3.75-10.76) p < .001
Sex: Other	-0.14 (-4.24-3.97) p = 0.948	-0.98 (-6.40-4.44) p = 0.723	-9.49 (-18.93- -0.05) p = 0.049
Age	0.88 (-1.23-3.00) p = 0.412	2.29 (-0.46-5.05) p = 0.102	2.72 (-2.17-7.62) p = 0.275
Ethnicity: Asian/Asian British	0.35 (-1.67-2.38) p = 0.733	-0.53 (-3.21-2.15) p = 0.698	0.74 (-4.05-5.52) p = 0.763
Ethnicity: Black/African/Caribbean/Black British	2.13 (-1.20-5.45) p = 0.210	2.23 (-2.18-6.63) p = 0.321	1.76 (-6.01-9.54) p = 0.657
Ethnicity: Mixed/Multiple	-2.02 (-5.11-1.07) p = 0.201	-4.63 (-8.72- -0.54) p = 0.027	-2.91 (-10.24-4.41) p = 0.436
Ethnicity: Other	9.00 (4.94-13.06) p < .001	11.57 (6.30-16.83) p < .001	10.16 (0.92-19.40) p = 0.031
IMD Quintile: 2	3.17 (0.84-5.51) p = 0.008	2.06 (-1.01-5.14) p = 0.188	2.76 (-2.70-8.22) p = 0.322
IMD Quintile: 3	2.32 (-0.08-4.72) p = 0.058	1.47 (-1.71-4.64) p = 0.365	-0.64 (-6.29-5.02) p = 0.826
IMD Quintile: 4	2.79 (0.25-5.34) p = 0.031	4.02 (0.66-7.38) p = 0.019	2.79 (-3.20-8.78) p = 0.361
IMD Quintile: 5	3.22 (0.66-5.78) p = 0.014	3.30 (-0.08-6.69) p = 0.056	3.44 (-2.63-9.51) p = 0.266
Source of Lunch: 100% School Provided	-5.29 (-6.67- -3.91) p < .001	-2.87 (-4.66- -1.08) p = 0.002	-0.90 (-4.09-2.29) p = 0.580
Percent FSM	-0.04 (-0.15-0.06) p = 0.440	-0.07 (-0.21-0.07) p = 0.306	-0.14 (-0.38-0.11) p = 0.276
School Level IDACI	0.09 (-0.02-0.19) p = 0.110	0.13 (-0.005-0.26) p = 0.060	0.21 (-0.04-0.45) p = 0.095
Sixth Form: Yes	-1.83 (-3.97-0.32) p = 0.095	-0.06 (-2.79-2.67) p = 0.964	-1.23 (-6.26-3.80) p = 0.633
Provision: External	-0.37 (-2.15-1.40) p = 0.680	1.13 (-1.12-3.37) p = 0.325	0.10 (-3.99-4.19) p = 0.960
Religious: Secular	4.54 (1.09-8.00) p = 0.010	4.68 (0.32-9.03) p = 0.035	7.10 (-0.91-15.12) p = 0.082
Year collected: 2020/2021	-2.69 (-5.93-0.55) p = 0.103	-0.44 (-4.55-3.68) p = 0.835	-1.42 (-8.93-6.08) p = 0.710
Year collected: 2021/2022	-2.86 (-4.66- -1.05) p = 0.002	-3.27 (-5.57- -0.97) p = 0.005	-3.78 (-7.95-0.39) p = 0.076
Year: 9	-3.11 (-7.66-1.43) p = 0.180	-6.37 (-12.29- -0.44) p = 0.035	-5.87 (-16.43-4.70) p = 0.277
Year: 10	-3.01 (-9.58-3.56) p = 0.369	-6.92 (-15.50-1.66) p = 0.114	-5.39 (-20.62-9.83) p = 0.488

Table 5: Outcome: Fibre intake

Coefficient	Fibre intake (g) Lunch	Fibre intake (g) School day	Fibre intake (g) 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	-0.05 (-0.77-0.67) p = 0.886	0.36 (-0.42-1.15) p = 0.362	1.22 (-0.73-3.17) p = 0.219
SFS/SFP Type: 2 B	1.43 (-0.23-3.08) p = 0.091	0.66 (-1.12-2.44) p = 0.467	1.29 (-3.33-5.91) p = 0.585
SFS/SFP Type: 3 A	-0.03 (-0.78-0.73) p = 0.948	0.33 (-0.49-1.15) p = 0.431	0.15 (-1.92-2.21) p = 0.890
SFS/SFP Type: 3 B	0.11 (-0.58-0.79) p = 0.763	0.46 (-0.29-1.21) p = 0.229	0.25 (-1.63-2.13) p = 0.791
SFS/SFP Type: 4 A	0.38 (-0.86-1.62) p = 0.551	0.56 (-0.76-1.89) p = 0.405	0.02 (-3.40-3.45) p = 0.990
Sex: Male	0.16 (-0.14-0.46) p = 0.303	0.29 (-0.08-0.67) p = 0.129	1.13 (0.38-1.88) p = 0.003
Sex: Other	-0.14 (-0.96-0.68) p = 0.737	-0.37 (-1.40-0.66) p = 0.480	-1.56 (-3.55-0.43) p = 0.125
Age	0.22 (-0.21-0.65) p = 0.323	0.44 (-0.10-0.97) p = 0.108	0.41 (-0.66-1.49) p = 0.453
Ethnicity: Asian/Asian British	0.06 (-0.36-0.47) p = 0.791	-0.20 (-0.72-0.32) p = 0.454	-0.02 (-1.07-1.03) p = 0.967
Ethnicity: Black/African/Caribbean/Black British	0.15 (-0.51-0.82) p = 0.651	-0.08 (-0.92-0.76) p = 0.859	-0.32 (-1.98-1.33) p = 0.702
Ethnicity: Mixed/Multiple	-0.27 (-0.89-0.35) p = 0.393	-0.72 (-1.50-0.05) p = 0.067	-0.55 (-2.10-1.00) p = 0.483
Ethnicity: Other	1.41 (0.60-2.22) p = 0.001	1.23 (0.23-2.23) p = 0.016	-0.30 (-2.26-1.65) p = 0.760
IMD Quintile: 2	0.21 (-0.26-0.68) p = 0.376	0.18 (-0.41-0.77) p = 0.548	0.38 (-0.79-1.55) p = 0.523
IMD Quintile: 3	0.13 (-0.36-0.62) p = 0.609	0.05 (-0.56-0.66) p = 0.865	0.40 (-0.82-1.62) p = 0.519
IMD Quintile: 4	0.26 (-0.26-0.78) p = 0.322	0.54 (-0.11-1.18) p = 0.104	1.01 (-0.29-2.31) p = 0.127
IMD Quintile: 5	0.37 (-0.15-0.90) p = 0.160	0.49 (-0.16-1.14) p = 0.142	1.61 (0.29-2.93) p = 0.017
Source of Lunch: 100% School Provided	-1.40 (-1.67- -1.12) p < .001	-0.86 (-1.20- -0.52) p < .001	-0.15 (-0.82-0.51) p = 0.653
Percent FSM	-0.02 (-0.05-0.003) p = 0.086	-0.03 (-0.06-0.0005) p = 0.054	-0.06 (-0.13-0.02) p = 0.122
School Level IDACI	0.01 (-0.01-0.04) p = 0.306	0.02 (-0.008-0.05) p = 0.155	0.05 (-0.03-0.12) p = 0.209
Sixth Form: Yes	0.14 (-0.43-0.72) p = 0.623	0.60 (-0.02-1.22) p = 0.059	0.66 (-0.93-2.25) p = 0.414
Provision: External	-0.009 (-0.47-0.45) p = 0.971	0.33 (-0.17-0.84) p = 0.195	-0.008 (-1.27-1.25) p = 0.990
Religious: Secular	0.64 (-0.29-1.58) p = 0.175	0.94 (-0.07-1.95) p = 0.067	1.00 (-1.58-3.59) p = 0.447
Year collected: 2020/2021	-0.005 (-0.87-0.86) p = 0.991	0.29 (-0.64-1.23) p = 0.538	0.007 (-2.38-2.39) p = 0.996
Year collected: 2021/2022	-0.43 (-0.90-0.04) p = 0.070	-0.55 (-1.06- -0.03) p = 0.037	-0.99 (-2.27-0.28) p = 0.127
Year: 9	-0.86 (-1.78-0.07) p = 0.070	-1.41 (-2.56- -0.27) p = 0.015	-1.19 (-3.49-1.12) p = 0.313
Year: 10	-1.01 (-2.36-0.33) p = 0.139	-1.58 (-3.24-0.07) p = 0.061	-1.26 (-4.59-2.07) p = 0.458

Table 6. Outcome: Fruit and vegetable (F&V) intake

Coefficient	F&V portions Lunch	F&V portions School day	F&V portions 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	-0.05 (-0.28-0.18) p = 0.654	-0.03 (-0.26-0.19) p = 0.766	0.39 (-0.11-0.89) p = 0.126
SFS/SFP Type: 2 B	-0.37 (-0.90-0.17) p = 0.177	-0.28 (-0.79-0.23) p = 0.282	-0.43 (-1.61-0.76) p = 0.480
SFS/SFP Type: 3 A	0.16 (-0.08-0.40) p = 0.190	0.23 (-0.004-0.47) p = 0.054	0.41 (-0.12-0.94) p = 0.130
SFS/SFP Type: 3 B	0.05 (-0.17-0.26) p = 0.688	0.14 (-0.08-0.36) p = 0.207	0.37 (-0.11-0.86) p = 0.130
SFS/SFP Type: 4 A	-0.007 (-0.41-0.39) p = 0.974	0.05 (-0.33-0.43) p = 0.795	0.007 (-0.87-0.89) p = 0.987
Sex: Male	-0.04 (-0.14-0.05) p = 0.377	-0.03 (-0.15-0.08) p = 0.560	-0.04 (-0.24-0.16) p = 0.692
Sex: Other	-0.16 (-0.43-0.10) p = 0.226	-0.27 (-0.58-0.05) p = 0.094	-0.47 (-1.00-0.06) p = 0.082
Age	0.03 (-0.11-0.17) p = 0.628	0.02 (-0.14-0.19) p = 0.765	0.12 (-0.16-0.41) p = 0.405
Ethnicity: Asian/Asian British	-0.03 (-0.17-0.10) p = 0.633	-0.07 (-0.22-0.09) p = 0.409	-0.09 (-0.37-0.19) p = 0.517
Ethnicity: Black/African/Caribbean/Black British	0.03 (-0.19-0.24) p = 0.790	0.002 (-0.25-0.26) p = 0.989	0.08 (-0.36-0.52) p = 0.720
Ethnicity: Mixed/Multiple	0.02 (-0.18-0.22) p = 0.820	-0.04 (-0.28-0.19) p = 0.715	-0.10 (-0.51-0.31) p = 0.633
Ethnicity: Other	0.17 (-0.09-0.43) p = 0.200	0.18 (-0.12-0.49) p = 0.237	-0.13 (-0.64-0.39) p = 0.636
IMD Quintile: 2	-0.02 (-0.17-0.14) p = 0.837	-0.03 (-0.21-0.15) p = 0.723	0.10 (-0.21-0.41) p = 0.539
IMD Quintile: 3	-0.0005 (-0.16-0.16) p = 0.995	-0.002 (-0.19-0.18) p = 0.983	0.24 (-0.08-0.57) p = 0.146
IMD Quintile: 4	-0.002 (-0.17-0.17) p = 0.985	0.01 (-0.19-0.21) p = 0.914	0.16 (-0.19-0.50) p = 0.369
IMD Quintile: 5	0.0005 (-0.17-0.17) p = 0.996	0.07 (-0.13-0.27) p = 0.493	0.28 (-0.07-0.63) p = 0.112
Source of Lunch: 100% School Provided	-0.25 (-0.34- -0.16) p < .001	-0.19 (-0.29- -0.09) p < .001	0.009 (-0.17-0.19) p = 0.922
Percent FSM	-0.008 (-0.02-0.0007) p = 0.073	-0.01 (-0.02- -0.002) p = 0.014	-0.03 (-0.04- -0.007) p = 0.007
School Level IDACI	0.002 (-0.007-0.01) p = 0.622	0.003 (-0.005-0.01) p = 0.444	0.01 (-0.006-0.03) p = 0.190
Sixth Form: Yes	0.08 (-0.11-0.26) p = 0.408	0.18 (-0.003-0.36) p = 0.054	0.32 (-0.09-0.73) p = 0.126
Provision: External	0.10 (-0.05-0.25) p = 0.192	0.16 (0.02-0.31) p = 0.027	0.10 (-0.22-0.43) p = 0.543
Religious: Secular	-0.04 (-0.34-0.26) p = 0.812	0.09 (-0.19-0.38) p = 0.525	0.06 (-0.60-0.73) p = 0.853
Year collected: 2020/2021	0.15 (-0.13-0.42) p = 0.301	0.16 (-0.11-0.43) p = 0.249	0.37 (-0.24-0.99) p = 0.232
Year collected: 2021/2022	0.11 (-0.04-0.26) p = 0.150	0.10 (-0.05-0.25) p = 0.202	0.05 (-0.28-0.38) p = 0.775
Year: 9	-0.08 (-0.38-0.21) p = 0.579	-0.12 (-0.47-0.22) p = 0.486	-0.32 (-0.93-0.29) p = 0.309
Year: 10	-0.17 (-0.60-0.27) p = 0.445	-0.14 (-0.64-0.37) p = 0.595	-0.45 (-1.33-0.44) p = 0.321

Table 7. Outcome: number of sugar sweetened beverages (SSB) consumed (Poisson models)

Coefficient	SSB items Incidence Rate Ratio Lunch	SSB items Incidence Rate Ratio School day	SSB items Incidence Rate Ratio 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	0.96 (0.60-1.55) p = 0.873	1.22 (0.71-2.07) p = 0.472	1.04 (0.67-1.62) p = 0.853
SFS/SFP Type: 2 B	0.55 (0.14-2.13) p = 0.387	0.64 (0.15-2.65) p = 0.534	1.34 (0.47-3.83) p = 0.579
SFS/SFP Type: 3 A	0.69 (0.41-1.13) p = 0.141	0.60 (0.34-1.07) p = 0.081	0.77 (0.48-1.25) p = 0.292
SFS/SFP Type: 3 B	1.05 (0.69-1.61) p = 0.811	0.85 (0.52-1.40) p = 0.528	0.80 (0.52-1.22) p = 0.301
SFS/SFP Type: 4 A	0.78 (0.34-1.77) p = 0.553	1.04 (0.44-2.48) p = 0.930	0.78 (0.36-1.70) p = 0.535
Sex: Male	0.88 (0.68-1.14) p = 0.341	0.95 (0.74-1.23) p = 0.712	0.93 (0.79-1.10) p = 0.403
Sex: Other	1.12 (0.56-2.21) p = 0.754	1.21 (0.63-2.32) p = 0.574	0.92 (0.58-1.46) p = 0.735
Age	1.05 (0.73-1.51) p = 0.808	0.91 (0.64-1.29) p = 0.600	0.86 (0.68-1.10) p = 0.235
Ethnicity: Asian/Asian British	0.68 (0.45-1.03) p = 0.069	0.77 (0.53-1.13) p = 0.178	0.78 (0.60-1.00) p = 0.048
Ethnicity: Black/African/Caribbean/Black British	0.93 (0.52-1.64) p = 0.796	1.07 (0.63-1.81) p = 0.811	0.86 (0.59-1.26) p = 0.440
Ethnicity: Mixed/Multiple	0.71 (0.39-1.29) p = 0.261	0.85 (0.50-1.43) p = 0.532	0.83 (0.58-1.19) p = 0.316
Ethnicity: Other	1.07 (0.59-1.95) p = 0.831	0.94 (0.50-1.76) p = 0.846	0.73 (0.46-1.17) p = 0.192
IMD Quintile: 2	0.86 (0.59-1.26) p = 0.439	0.96 (0.67-1.39) p = 0.839	1.03 (0.80-1.32) p = 0.843
IMD Quintile: 3	0.72 (0.48-1.07) p = 0.107	0.80 (0.54-1.18) p = 0.257	0.92 (0.71-1.20) p = 0.551
IMD Quintile: 4	0.71 (0.46-1.09) p = 0.116	0.76 (0.50-1.17) p = 0.216	1.01 (0.76-1.35) p = 0.930
IMD Quintile: 5	0.52 (0.33-0.82) p = 0.005	0.68 (0.44-1.06) p = 0.090	0.71 (0.53-0.97) p = 0.031
Source of Lunch: 100% School Provided	0.88 (0.69-1.13) p = 0.316	1.03 (0.82-1.29) p = 0.800	1.23 (1.06-1.43) p = 0.007
Percent FSM	1.00 (0.98-1.02) p = 0.844	0.99 (0.97-1.01) p = 0.310	1.00 (0.98-1.01) p = 0.789
School Level IDACI	1.01 (0.99-1.03) p = 0.337	1.02 (1.00-1.04) p = 0.063	1.02 (1.00-1.03) p = 0.070
Sixth Form: Yes	1.12 (0.77-1.61) p = 0.564	1.01 (0.66-1.55) p = 0.964	1.02 (0.70-1.47) p = 0.929
Provision: External	0.96 (0.72-1.29) p = 0.809	0.82 (0.58-1.15) p = 0.248	0.89 (0.66-1.18) p = 0.406
Religious: Secular	1.67 (0.77-3.61) p = 0.192	2.19 (0.97-4.93) p = 0.058	1.43 (0.78-2.62) p = 0.248
Year collected: 2020/2021	0.89 (0.52-1.53) p = 0.685	0.89 (0.48-1.65) p = 0.705	1.02 (0.60-1.75) p = 0.930
Year collected: 2021/2022	0.66 (0.49-0.89) p = 0.006	0.69 (0.49-0.96) p = 0.029	0.88 (0.66-1.18) p = 0.398
Year: 9	0.71 (0.33-1.57) p = 0.400	0.88 (0.41-1.85) p = 0.730	1.13 (0.67-1.89) p = 0.654
Year: 10	0.64 (0.20-1.99) p = 0.437	0.84 (0.28-2.51) p = 0.757	1.02 (0.48-2.17) p = 0.969

Table 8. Outcome: number of high fat, sugar and salt (HFSS) items consumed (Poisson models)

Coefficient	HFSS items Incidence Rate Ratio Lunch	HFSS items Incidence Rate Ratio School day	HFSS items Incidence Rate Ratio 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	1.13 (0.95-1.35) p = 0.176	1.26 (1.10-1.44) p = 0.001	1.22 (1.10-1.35) p < .001
SFS/SFP Type: 2 B	0.83 (0.54-1.28) p = 0.404	0.91 (0.67-1.23) p = 0.523	1.06 (0.84-1.33) p = 0.624
SFS/SFP Type: 3 A	1.02 (0.86-1.21) p = 0.807	1.11 (0.98-1.27) p = 0.105	1.08 (0.98-1.20) p = 0.131
SFS/SFP Type: 3 B	1.13 (0.96-1.31) p = 0.133	1.17 (1.04-1.32) p = 0.011	1.14 (1.03-1.25) p = 0.008
SFS/SFP Type: 4 A	1.23 (0.92-1.65) p = 0.156	1.20 (0.96-1.50) p = 0.110	1.21 (1.02-1.42) p = 0.028
Sex: Male	0.88 (0.80-0.96) p = 0.005	0.90 (0.84-0.97) p = 0.004	0.93 (0.88-0.99) p = 0.018
Sex: Other	1.03 (0.82-1.30) p = 0.795	0.91 (0.75-1.12) p = 0.379	0.79 (0.67-0.93) p = 0.004
Age	0.96 (0.85-1.09) p = 0.512	1.00 (0.91-1.11) p = 0.944	0.99 (0.92-1.08) p = 0.882
Ethnicity: Asian/Asian British	0.84 (0.74-0.95) p = 0.005	0.83 (0.75-0.92) p < .001	0.87 (0.80-0.94) p < .001
Ethnicity: Black/African/Caribbean/Black British	0.79 (0.62-0.99) p = 0.043	0.92 (0.77-1.10) p = 0.359	0.91 (0.80-1.04) p = 0.173
Ethnicity: Mixed/Multiple	0.87 (0.72-1.06) p = 0.163	0.87 (0.74-1.02) p = 0.089	0.87 (0.77-0.98) p = 0.024
Ethnicity: Other	1.14 (0.91-1.42) p = 0.252	1.03 (0.85-1.25) p = 0.760	1.02 (0.88-1.18) p = 0.775
IMD Quintile: 2	1.03 (0.89-1.18) p = 0.708	1.05 (0.94-1.18) p = 0.380	1.03 (0.95-1.13) p = 0.459
IMD Quintile: 3	1.08 (0.94-1.24) p = 0.288	1.10 (0.98-1.24) p = 0.109	1.07 (0.98-1.17) p = 0.156
IMD Quintile: 4	1.18 (1.01-1.37) p = 0.032	1.20 (1.06-1.36) p = 0.004	1.15 (1.04-1.27) p = 0.005
IMD Quintile: 5	1.15 (0.99-1.34) p = 0.064	1.21 (1.06-1.37) p = 0.004	1.17 (1.06-1.29) p = 0.002
Source of Lunch: 100% School Provided	0.55 (0.50-0.60) p < .001	0.70 (0.65-0.75) p < .001	0.89 (0.85-0.94) p < .001
Percent FSM	0.99 (0.98-1.00) p = 0.009	0.99 (0.99-1.00) p = 0.021	1.00 (0.99-1.00) p = 0.087
School Level IDACI	1.01 (1.01-1.02) p < .001	1.01 (1.00-1.01) p < .001	1.01 (1.00-1.01) p = 0.002
Sixth Form: Yes	1.01 (0.89-1.15) p = 0.837	1.09 (0.99-1.20) p = 0.078	1.06 (0.98-1.14) p = 0.166
Provision: External	1.03 (0.93-1.15) p = 0.535	1.02 (0.94-1.11) p = 0.567	1.02 (0.95-1.08) p = 0.618
Religious: Secular	1.20 (0.96-1.49) p = 0.111	1.08 (0.92-1.28) p = 0.352	0.97 (0.86-1.11) p = 0.695
Year collected: 2020/2021	0.93 (0.77-1.12) p = 0.439	1.03 (0.89-1.19) p = 0.677	1.02 (0.91-1.14) p = 0.766
Year collected: 2021/2022	0.85 (0.77-0.95) p = 0.004	0.86 (0.79-0.93) p < .001	0.91 (0.85-0.97) p = 0.004
Year: 9	0.99 (0.76-1.29) p = 0.927	0.91 (0.73-1.13) p = 0.398	0.96 (0.81-1.13) p = 0.600
Year: 10	1.02 (0.69-1.50) p = 0.936	0.93 (0.68-1.28) p = 0.662	0.96 (0.75-1.23) p = 0.757

Table 9. Outcome: number of confectionery items consumed (Poisson models)

Coefficient	Confectionery items Incidence Rate Ratio Lunch	Confectionery items Incidence Rate Ratio School day	Confectionery items Incidence Rate Ratio 24-hour day
Pupils	1,878	1,934	2,045
Schools	36	36	36
SFS/SFP Type: 1 B	1.07 (0.67-1.72) p = 0.779	1.37 (0.98-1.91) p = 0.066	1.19 (0.93-1.52) p = 0.161
SFS/SFP Type: 2 B	0.44 (0.05-3.63) p = 0.446	2.47 (1.19-5.15) p = 0.015	1.37 (0.80-2.37) p = 0.253
SFS/SFP Type: 3 A	0.82 (0.53-1.26) p = 0.365	1.09 (0.79-1.50) p = 0.594	1.10 (0.86-1.41) p = 0.447
SFS/SFP Type: 3 B	1.01 (0.69-1.49) p = 0.943	1.21 (0.90-1.62) p = 0.213	1.18 (0.94-1.48) p = 0.157
SFS/SFP Type: 4 A	2.19 (1.14-4.20) p = 0.018	1.62 (0.97-2.72) p = 0.066	1.58 (1.08-2.30) p = 0.019
Sex: Male	0.84 (0.66-1.07) p = 0.156	0.82 (0.69-0.98) p = 0.031	0.74 (0.65-0.85) p < .001
Sex: Other	0.43 (0.17-1.07) p = 0.069	0.57 (0.31-1.03) p = 0.064	0.45 (0.28-0.72) p = 0.001
Age	1.03 (0.74-1.43) p = 0.865	1.00 (0.78-1.27) p = 0.977	0.92 (0.77-1.11) p = 0.402
Ethnicity: Asian/Asian British	0.77 (0.54-1.09) p = 0.143	0.70 (0.54-0.92) p = 0.009	0.71 (0.59-0.87) p = 0.001
Ethnicity: Black/African/Caribbean/Black British	0.63 (0.30-1.32) p = 0.220	0.91 (0.58-1.43) p = 0.679	0.78 (0.56-1.08) p = 0.139
Ethnicity: Mixed/Multiple	0.80 (0.46-1.37) p = 0.412	0.98 (0.68-1.42) p = 0.932	0.84 (0.63-1.13) p = 0.249
Ethnicity: Other	0.98 (0.52-1.85) p = 0.945	1.13 (0.72-1.76) p = 0.602	0.87 (0.61-1.26) p = 0.469
IMD Quintile: 2	1.27 (0.86-1.90) p = 0.232	1.29 (0.97-1.71) p = 0.083	1.21 (0.97-1.49) p = 0.087
IMD Quintile: 3	1.40 (0.94-2.07) p = 0.094	1.43 (1.07-1.92) p = 0.015	1.33 (1.07-1.66) p = 0.011
IMD Quintile: 4	1.73 (1.15-2.61) p = 0.009	1.47 (1.08-2.00) p = 0.016	1.30 (1.03-1.65) p = 0.029
IMD Quintile: 5	1.45 (0.95-2.21) p = 0.082	1.44 (1.05-1.98) p = 0.023	1.49 (1.18-1.89) p = 0.001
Source of Lunch: 100% School Provided	0.15 (0.11-0.22) p < .001	0.33 (0.27-0.40) p < .001	0.67 (0.58-0.76) p < .001
Percent FSM	0.99 (0.97-1.01) p = 0.274	1.00 (0.98-1.01) p = 0.488	1.00 (0.99-1.01) p = 0.349
School Level IDACI	1.01 (0.99-1.03) p = 0.188	1.01 (1.00-1.02) p = 0.225	1.00 (0.99-1.01) p = 0.886
Sixth Form: Yes	1.09 (0.80-1.49) p = 0.578	1.25 (0.98-1.58) p = 0.071	1.14 (0.95-1.38) p = 0.165
Provision: External	0.94 (0.72-1.24) p = 0.672	0.99 (0.81-1.22) p = 0.945	1.02 (0.87-1.18) p = 0.835
Religious: Secular	1.69 (0.95-3.00) p = 0.073	1.26 (0.83-1.93) p = 0.282	0.86 (0.64-1.16) p = 0.317
Year collected: 2020/2021	0.77 (0.47-1.24) p = 0.283	0.81 (0.56-1.17) p = 0.256	0.84 (0.63-1.12) p = 0.236
Year collected: 2021/2022	0.86 (0.65-1.13) p = 0.268	0.81 (0.66-0.99) p = 0.036	0.82 (0.70-0.96) p = 0.011
Year: 9	0.80 (0.39-1.62) p = 0.531	0.96 (0.57-1.63) p = 0.885	1.14 (0.76-1.71) p = 0.522
Year: 10	0.77 (0.28-2.15) p = 0.622	1.00 (0.47-2.15) p = 0.998	1.29 (0.72-2.31) p = 0.386