

Appendix: An assessment of missing values and attrition bias

The table shows descriptive statistics and group comparisons for samples of participants before and after a sample restriction was imposed. The test for missing values compared participants who remained in the sample (n=7,471) with those excluded because they did not report BMI at t0 (n=339). The test for attrition bias compared individuals who remained in the sample (n=6,634) with those excluded from the analysis because they were no longer in the dataset at t2 (n=837). The results show significant differences in the characteristics of individuals (e.g. in terms of age, gender, income and BMI) between groups, indicating that attrition and missing values are likely to be a source of bias in the results.

Characteristic (at t0)	Test for missing values (height and weight data) bias (See [a] in Figure 1)			Test for attrition bias (See [b] in Figure 1)		
	% or mean		p ^b	% or mean		p ^b
	Participants retained in the sample	Participants excluded from analysis due to missing BMI at t0		Participants retained in the sample	Participants excluded from analysis due to leaving the dataset before t2	
n ^a	7,471	339		6,634	837	
Age (mean years)	39.6	37.2**	0.001	35.6	40.1	<0.001
Male ^c	50.4	19.8***	<0.001	52.1	50.2	0.298
Professional or managerial occupation ^c	39.2	33.9	0.052	37.5	39.4	0.296
Full time work ^c	78.0	66.7***	<0.001	79.9	77.8	0.152
Works at night time ^c	2.1	2.9	0.319	2.3	2.1	0.785
Household income (mean £s)	31,126.8	29,021.5*	0.011	29,417.9	31,342.4	0.008
Education: Degree or higher qualification ^c	19.2	13.6**	0.009	20.0	19.1	0.576
One or more children in the household ^c	19.6	30.7***	<0.001	14.1	20.3	<0.001
Lives in London or South-East England ^c	13.9	13.3	0.737	16.1	13.6	0.050
BMI (mean kg/m ²)	n/a	n/a	n/a	25.2	26.0	>0.001
WHO-classified overweight ^c	n/a	n/a	n/a	47.2	52.9	0.002
'Poor' or 'very poor' self-assessed health ^c	4.8	6.8	0.091	5.0	4.7	0.716
Self-reported smoker ^c	25.9	23.3	0.278	31.7	25.2	<0.001
More than 3 annual hospital visits ^{a c}	11.4	15.1*	0.039	10.3	11.6	0.268
More than 6 annual primary care visits ^{a c}	10.7	13.3	0.130	10.0	10.8	0.510
One or more cars in household ^c	91.2	86.1**	0.001	88.1	91.6	0.001
Number of cars in household (mean)	1.6	1.5	0.122	1.5	1.6	0.005
Commute time (mean minutes) ^a	23.8	20.4**	0.002	24.8	23.7	0.031
At least weekly LTPA ^{a c}	59.0	52.8*	0.023	58.5	59.1	0.735
At least weekly gardening ^{a c}	22.4	16.8*	0.015	15.1	23.3	<0.001
At least weekly eating out ^{a c}	18.3	15.3	0.172	21.3	17.9	0.016

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Sample sizes used in a small number of cases was less than shown since values were not reported for some variables for all individuals.

^b The results of Chi-squared tests (or Mann-Whitney tests for number of cars, age, income and commute time, or student's t-tests for BMI), where the null hypothesis was that the difference between the two groups was equal to zero.

^c Binary variables were created as described in Table 2.