<u>Millennium Cohort Study, 5th Sweep: enhanced with variables used to examine the uptake and impact of Bikeability cycle training.</u>

A number of area-level or school-level variables were merged into the fifth sweep of the Millennium Cohort Study (MCS) in order to examine the uptake and impact of Bikeability cycle training. The data merging was performed at the Centre for Longitudinal Studies by Jon Johnson in 2013/2014. The variables were prepared for merging by Anna Goodman (anna.goodman@LSHTM.ac.uk) in 2012-2014, and analysed in 2014-2016. This research was funded by the Economic and Social Research Council (grant no. ES/L013606/1, principle investigator Dr. Anna Goodman). Publications arising from this grant are:

1.   Goodman A, van Sluijs E, Ogilvie D: **Cycle training for children: which schools offer it and who takes part?** *Journal of Transport and Health* 2015, **2:**512–521.
2.   Goodman A, van Sluijs E, Ogilvie D: **Impact of offering cycle training in schools upon cycling behaviour: a natural experimental study.** *International Journal of Behavioural Nutrition and Physical Activity* 2016, **13**:34.

The accompanying dataset 'UKDA_MCSbikeability_feb2016' consists only of those children attending a school in England and whose ES flag ('EPESST00') indicated that they had provided data (N = 8624). The restriction to English schools reflects the fact that Bikeability delivery data was not available outside of England. As well as the standard MCS child identifiers, the dataset contains:

- 3 anonymised area- and school identifiers, which can be used for the purposes of assessing or adjusting for clustering.
- 5 variables used by Anna Goodman in conducting the analysis for the two journal articles above.
- 2 variables indicating the analytical study populations for the two journal articles above.

Further detail concerning these variables is provided in Table 1.

Table 1: Data description of variables in data file 'UKDA_MCSbikeability_feb2016'

Name	Description	Origin	Coding
MCSID	MCS Research ID	MCS study	N/A
ECCNUM00	Child Number	MCS study	N/A
eleaanon	Anonymised ID for LEA that child's school is in	CLS-generated	N/A
eschanon	Anonymised ID for child's school	CLS-generated	N/A
anonlsoa	Anonymised ID for child's home LSOA	CLS-generated	N/A, but -99= 'missing'
pcycle_lsoa2011fl	Percent adults cycling to work in child's home LSOA, Census 2011	Census 2011	-99=missing 0: <1% 1: 1-1.9% 2: 2-2.9 3: 3-3.9 4: 4-4.9 5: 5-5.9% 6: 6-9.9 10: 10-14.9% 15: >=15%

Name	Description	Origin	Coding
morph6	Urban/rural status of child's home LSOA, 2004 Rural & Urban Area Classification	LSOA, 2004 Rural & Urban Area Classification	-99=missing 1: Urban >10k - sparse 2: Town & fringe - sparse 3: village hamlet isolated - sparse 4: Urban >10k - less sparse 5: Town & fringe - less sparse 6: village hamlet isolated - less sparse
bike_y5_any	Bikeability offered in school in Year 5 (used in sensitivity analyses)		-99=missing -1: Child ineligible* 0: No Bikeability in year 5 1: Bikeability in year 5
bike_y5y6_cat4	Bikeability exposure relative to MCS interview, Year5 + Year6.	Created by Anna Goodman based on operational Bikeability delivery data provided by the Department for Transport, and drawing on the date of the interview recorded in MCS	-99=missing -1: Child ineligible* 1: Intervention group: Bikeability pre-MCS 2: Control group: Bikeability post-MCS 3: Never offered Bikeability in school 4: Ambiguous as to when had Bikeability †
bike_monthbefore	Number of months since Bikeability training at time of MCS interview		*Negative numbers indicate that Bikeability training happened after the MCS interview, e.g. '-3' indicates that Bikeability training happened 3 months after the MCS interview. This variable is only present for the intervention and control groups. The negative number '-99' identified missing data*
studypop1	Child in the study population in journal article 1, above (Goodman et al. 2015)	Created by Anna Goodman. *	0=Not in study population 1=In study population
studypop2	Child in the study population in journal article 2, above (Goodman et al. 2016)	Created by Anna Goodman $	0=Not in study population 1=In study population

CLS=Centre for Longitudinal Studies, LEA=Local Education Authority, LSOA=Lower Super Output Area, MCS=Millennium Cohort Study.

* children ineligible if going to school outside England, if going to school in London, if in a non-standard school year, or if not in school. These same criteria also defined children not in the study population for paper 1

†Children ambiguous if Bikeability was offered in same month as the MCS interview, Bikeability was offered twice, once before and once after the interview or if the date of Bikeability training was missing. Note that in the analysis conducted in the journal articles, the 5 children with missing data on this variable were subsequently recoded as 'uncertain'.

$ the study population for paper 2 used the same criteria as the study population for paper 1, and additionally excluded children whose Bikeability exposure was ambiguous or who were never offered Bikeability.