

**Supplementary Appendix 1: Frequency distributions or means of study variables, according to sample**

	<b>Observed sample (no restrictions)† (n=15381)</b>	<b>Multiply imputed sample (n=9240)</b>	<b>Complete case sample (n= 7524)</b>
<b>Variables recorded at 3 years</b>			
<i>Sex of child</i>			
Male	51.1 (7866)	51.1	50.8 (3775)
Female	48.9 (7515)	48.9	49.2 (3749)
<i>Maternal highest qualification</i>			
A/AS/S levels and above	38.4 (5842)	38.9	42.7 (3550)
O levels/GCSEs A-C	34.5 (5100)	37.2	37.3 (2648)
O levels/GCSEs D-G and below	27.1 (4386)	23.8	20.0 (1326)
<i>Item missing</i>	53		
<i>Maternal age at cohort child's birth</i>			
14 – 19 years	7.9 (1214)	7.8	6.6 (391)
20 – 29 years	44.3 (6935)	44.5	43.7 (3137)
30 – 39 years	45.2 (6830)	45.1	47.2 (3791)
40 years and above	2.5 (391)	2.6	2.5 (205)
<i>Item missing</i>	11		
<i>Ethnicity</i>			
White	88.5 (12501)	93.4	94.4 (7066)
Mixed	0.9 (133)	0.9	0.9 (51)
Indian	2.0 (377)	1.4	1.3 (110)
Pakistani/Bangladeshi	4.3 (938)	1.9	1.4 (132)
Black or Black British	2.8 (451)	1.8	1.5 (108)
Other	1.5 (244)	0.7	0.6 (57)
<i>Item missing</i>	737		
<i>Diagnosed depression/anxiety (ever)</i>			
No diagnosis	65.0 (9953)	64.3	65.1 (4966)
Diagnosis	35.0 (5320)	35.7	34.9 (2558)
<i>Item missing</i>	108		
<i>Psychological distress (3 years)</i>			
No/low distress	66.4 (8992)	66.2	67.5 (5171)
Medium distress	30.3 (4121)	30.5	29.7 (2161)
High distress	3.2 (476)	3.3	2.9 (192)
<i>Scale items missing</i>	1792		
<i>Household income quintiles</i>			
Lowest quintile	20.1 (3307)	17.6	15.3 (1028)
Second quintile	19.9 (3335)	19.7	17.8 (1332)
Third quintile	20.0 (2992)	21.0	21.2 (1609)
Fourth quintile	20.0 (2862)	21.0	22.7 (1763)
Highest quintile	20.0 (2701)	20.6	23.0 (1792)

<i>Item missing</i>	184		
<i>Family structure</i>			
Couple family	82.3 (12503)	83.7	85.3 (6583)
Lone parent family	17.7 (2678)	16.3	14.7 (941)
<i>Item missing</i>	200		
<i>Housing tenure</i>			
Mortgage / own outright	64.5 (9790)	66.7	70.8 (5652)
rent privately	7.4 (1113)	6.9	5.9 (408)
Social housing	24.8 (3799)	23.4	20.3 (1253)
Other	3.4 (540)	2.3	3.0 (211)
<i>Item missing</i>	139		
<i>Number of children in household</i>			
One	25.4 (3941)	24.9	25.1 (1925)
Two	46.5 (6846)	48.1	49.0 (3640)
Three	18.6 (2943)	18.6	18.1 (1365)
four or more	9.6 (1649)	8.4	7.8 (594)
<i>Item missing</i>	2		
<i>Parental harsh discipline<sup>1</sup></i>			
Mean (SE)	12.1 (0.04)	12.2 (0.04)	12.3 (0.04)
<i>Scale items missing</i>	2836		
<i>Child-Parent conflict<sup>2</sup></i>			
Mean (SE)	17.3 (0.07)	17.4 (0.09)	17.3 (0.09)
<i>Scale items missing</i>	2370		
<i>Child-Parent Closeness<sup>3</sup></i>			
Mean (SE)	33.5 (0.03)	33.5 (0.03)	33.6 (0.03)
<i>Scale items missing</i>	2636		
<i>Child Conduct Problems<sup>4</sup></i>			
Mean (SE)	2.8 (0.03)	2.8 (0.03)	2.7 (0.03)
<i>Scale items missing</i>	811		
<i>Child Hyperactivity<sup>5</sup></i>			
Mean (SE)	3.9 (0.3)	3.9 (0.04)	3.7 (0.04)
<i>Scale items missing</i>	949		
<b>Variables recorded at 5 years</b>			
<i>Injury 3 to 5 years</i>			
None	71.8 (10766)	72.6	73.0 (5515)
One	22.7 (3383)	22.6	22.5 (1673)
Two or more	5.5 (808)	4.8	4.6 (336)
<i>item missing</i>	84		
<i>Not present at relevant sweep</i>	340		
<i>Diagnosed depression/anxiety (ever)</i>			
No diagnosis	60.2 (9049)	59.5	56.9 (4377)

Diagnosis	39.4 (5918)	40.5	43.1 (3147)
<i>Item missing</i>	74		
<i>Not present at relevant sweep</i>	340		
<i>Psychological distress (5 years)</i>			
No/low distress	67.5 (9497)	68.2	69.7 (5322)
Medium distress	29.2 (4135)	28.5	27.7 (2015)
High distress	3.3 (507)	3.3	2.7 (187)
<i>Item missing</i>	902		
<i>Not present at relevant sweep</i>	340		
<i>Psychological distress (highest reported, 3 and 5 year sweeps)</i>			
No/low distress	55.7 (6558)	54.9	56.6 (4343)
Medium distress	39.2 (4685)	39.6	38.8 (2861)
High distress	5.2 (642)	5.5	4.6 (320)
<i>Scale items missing</i>	3156		
<i>Not present at relevant sweep</i>	340		
<i>Household income quintiles</i>			
Lowest quintile	20.1 (3346)	16.8	14.3 (971)
Second quintile	19.9 (3209)	19.6	18.3 (1343)
Third quintile	20.1 (2908)	21.3	21.6 (1638)
Fourth quintile	19.9 (2855)	21.0	22.1 (1763)
Highest quintile	20.0 (2614)	21.4	23.7 (1809)
<i>Item missing</i>	109		
<i>Not present at relevant sweep</i>	340		
<i>Family structure</i>			
Couple family	80.2 (12006)	81.5	82.9 (6402)
Lone parent family	19.8 (2981)	18.5	17.1 (1122)
<i>Item missing</i>	54		
<i>Not present at relevant sweep</i>	340		
<i>Housing tenure</i>			
Mortgage / own outright	64.9 (9636)	67.2	71.1 (5701)
rent privately	8.5 (1250)	7.5	6.9 (445)
Social housing	23.9 (3647)	22.8	19.7 (1210)
Other	2.7 (419)	2.5	2.4 (168)
<i>Item missing</i>	89		
<i>Not present at relevant sweep</i>	340		
<i>Number of children in household</i>			
one	16.6 (2483)	16.3	16.3 (1207)
two	48.1 (6986)	49.8	51.0 (3847)
three	23.4 (3574)	23.2	22.8 (1739)
four or more	12.0 (1997)	10.6	10.0 (731)
<i>Item missing</i>	1		
<i>Not present at relevant sweep</i>	340		
<i>Parental harsh discipline<sup>1</sup></i>			

Mean (SE)	10.9 (0.03)	11.0 (0.04)	11.0 (0.04)
<i>Scale items missing</i>	1245		
<i>Not present at relevant sweep</i>	340		
<i>Child Conduct Problems<sup>4</sup></i>			
Mean (SE)	1.5 (0.02)	1.5 (0.02)	1.4 (0.02)
<i>Scale items missing</i>	494		
<i>Not present at relevant sweep</i>	340		
<i>Child Hyperactivity<sup>5</sup></i>			
Mean (SE)	3.3 (0.03)	3.3 (0.04)	3.1 (0.04)
<i>Scale items missing</i>	580		
<i>Not present at relevant sweep</i>	340		
<b>Variables recorded at 7 years</b>			
<i>Injury 5-7 years</i>			
None	75.5 (10356)	75.9	76.6 (5786)
One	19.9 (2672)	19.6	19.3 (1464)
Two or more	4.6 (573)	4.5	4.1 (274)
<i>items missing</i>	80		
<i>Not present at relevant sweep</i>	1700		
<i>Diagnosed depression/anxiety (ever)</i>			
No diagnosis	56.2 (7769)	55.9	56.9 (4377)
Diagnosis	43.8 (5834)	44.1	43.1 (3147)
<i>item missing</i>	78		
<i>Not present at relevant sweep</i>	1700		
<i>Psychological distress (7 years)</i>			
No/low distress	67.4 (8833)	68.6	70.0 (5345)
Medium distress	28.8 (3687)	27.8	27.0 (1984)
High distress	3.8 (471)	3.6	3.0 (195)
<i>item missing</i>	690		
<i>Not present at relevant sweep</i>	1700		
<i>Psychological distress (highest reported, 3, 5, 7 year sweeps)</i>			
No/low distress	48.2 (5097)	47.9	49.5 (3828)
Medium distress	44.5 (4599)	44.6	44.2 (3262)
High distress	7.3 (724)	7.5	6.4 (434)
<i>item missing</i>	3261		
<i>Not present at relevant sweep</i>	1700		
<i>Household income quintiles</i>			
Lowest quintile	20.1 (2820)	16.0	13.5 (968)
Second quintile	20.0 (2830)	18.6	17.1 (1265)
Third quintile	20.0 (2768)	21.0	21.0 (1627)
Fourth quintile	19.9 (2653)	22.2	23.8 (1798)
Highest quintile	20.0 (2590)	22.1	24.6 (1866)
<i>item missing</i>	20		
<i>Not present at relevant sweep</i>	1700		

<i>Family structure</i>			
Couple family	78.6 (10750)	79.8	81.5 (6279)
Lone parent family	21.0 (2870)	20.2	18.5 (1245)
<i>item missing</i>	61		
<i>Not present at relevant sweep</i>	1700		
<i>Housing tenure</i>			
Mortgage / own outright	62.9 (8996)	67.0	71.0 (5735)
rent privately	9.7 (1177)	8.8	8.1 (497)
Social housing	24.8 (3092)	22.0	18.8 (1153)
Other	2.6 (323)	2.2	2.1 (139)
<i>item missing</i>	93		
<i>Not present at relevant sweep</i>	1700		
<i>Number of children in household</i>			
One	13.3 (1771)	13.0	12.9 (964)
Two	46.2 (6187)	48.3	49.3 (3730)
three	26.8 (3699)	27.0	26.8 (2024)
four or more	13.8 (2024)	11.7	10.9 (806)
<i>item missing</i>	0		
<i>Not present at relevant sweep</i>	1700		
<i>Parental harsh discipline<sup>1</sup></i>			
Mean (SE)	10.4 (0.03)	10.5 (0.04)	10.6 (0.04)
<i>Scale items missing</i>	1037		
<i>Not present at relevant sweep</i>	1700		
<i>Child Conduct Problems<sup>4</sup></i>			
Mean (SE)	1.4 (0.02)	1.4 (0.05)	1.3 (0.03)
<i>Scale items missing</i>	383		
<i>Not present at relevant sweep</i>	1700		
<i>Child Hyperactivity<sup>5</sup></i>			
Mean (SE)	3.4 (0.03)	3.3 (0.04)	3.2 (0.04)
<i>Scale items missing</i>	433		
<i>Not present at relevant sweep</i>	1700		
<b>Variables recorded at 11 years</b>			
<i>Injury 7- 11years</i>			
None	61.7 (8236)	61.6	61.7 (4700)
One	26.5 (3329)	26.6	26.7 (1985)
Two or more	11.8 (1432)	11.8	11.7 (839)
<i>items missing</i>	115		
<i>Not present at relevant sweep</i>	2269		

†Observations weighted to account for sample design and attrition to relevant sweep

<sup>1</sup> Conflict Tactics Scale items, scoring range 4-20 (high score reflects more frequent use of harsh disciplinary behaviours by mother)

<sup>2</sup> CPRS: Short-Form; Conflicts subscale, scoring range 5-40 (high score reflects greater conflict between mother and child)

<sup>3</sup> CPRS: Short-Form; Closeness subscale, scoring range 5-35 (high score reflects greater closeness between mother and child)

<sup>4</sup> SDQ: Conduct Problems subscale, scoring range 0-10 (high score reflects greater levels of conduct problems)

<sup>5</sup> SDQ: Hyperactivity subscale, scoring range 0-10 (high score reflects greater levels of hyperactivity)