**List of ICD Codes**

Psychiatric diagnoses in childhood

* ICD-10 codes: F80-F98
* ICD-8 codes: 2958, 299, 3000, 3003, 3013, 3051, 3055, 3056, 3060, 3061, 3062, 3063, 3065, 3066, 3067, 3069, 307, 308, 310, 315, 3479, 7804, 7815, 7816, 7889, 7960

Neurological diagnoses in childhood

* ICD-10 codes: C70-C72, C751, C753, D32-D33, D352, D354, G00-G47, G80-G93, S02, S06, S07, S08
* ICD-8 codes: 0360, 0459, 065, 136, 191, 1920, 1921, 1922, 1923, 1929, 1943, 1944, 1991, 2250, 2251, 2252, 2253, 2254, 2259, 2262, 2263, 2530, 2532, 2580, 2750, 2901, 292, 2932, 2934, 2939, 2941, 2948, 2949, 3008, 3031, 3032, 3039, 3051, 3052, 3053, 3055, 3056, 3059, 3062, 3064, 3068, 3069, 3074, 308, 309, 3200, 3201, 3208, 3209, 321, 322, 323, 324, 3301, 3309, 3310, 3311, 3312, 3319, 3320, 3321, 3329, 3331, 3339, 340, 341, 342, 343, 344, 3448, 3450, 3451, 3452, 3453, 3459, 346, 347, 3470, 3479, 3480, 3481, 3482, 3488, 3489, 3499, 350, 351, 354, 355, 356, 357, 358, 373, 3770, 3789, 3929, 431, 432, 433, 435, 436, 4369, 437, 4389, 447, 4580, 4829, 573, 596, 7149, 7172, 7289, 729, 7339, 738, 7438, 7439, 7803, 7804, 7805, 7806, 7816, 7817, 7832, 7871, 791, 794, 7960, 800, 801, 8020, 8021, 8022, 8023, 8024, 8025, 803, 804, 8500, 8510, 8511, 8520, 8521, 8530, 8531, 8540, 8541, 8720, 8721, 8730, 8731, 8732, 8733, 8737, 8738, 920, 9673, 9679, 9760, 9909, 9953, 9970, 9989, 9991, 9999

Perinatal diagnoses and congenital deformities

* ICD-10 codes: P00-P61, P90-P96, Q00-Q07, Q20-Q28, Q85-Q89
* ICD-8 codes: 0039, 011, 0122, 0270, 0389, 0399, 043, 054, 056, 070, 0780, 0795, 0849, 0909, 112, 1301, 136, 208, 2119, 216, 224, 228, 2699, 280, 2871, 288, 2894, 2899, 3302, 344, 3479, 3489, 350, 356, 357, 360, 368, 425, 470, 486, 5112, 5511, 599, 6110, 6259, 6266, 6269, 6821, 6861, 6869, 703, 7330, 7331, 740, 7410, 7419, 742, 7430, 7431, 7432, 7433, 7434, 7438, 7439, 7442, 7459, 7460, 7461, 7462, 7363, 7464, 7465, 7466, 7468, 7469, 7470, 7471, 7472, 7473, 7474, 7475, 7476, 7478, 7479, 7520, 7527, 7533, 7555, 7560, 7568, 7569, 7572, 7579, 7580, 7581, 7582, 7583, 7588, 7589, 7590, 7591, 7592, 7593, 7594, 7595, 7596, 7598, 7599, 7600, 7601, 7602, 7603, 7604, 7605, 7607, 7610, 7612, 7613, 7614, 7615, 7616, 7617, 7619, 7620, 7621, 7622, 7623, 7624, 7625, 7629, 7630, 7631, 7639, 764, 765, 766, 767, 768, 7690, 7691, 7692, 7693, 7694, 7695, 7699, 7700, 7701, 7702, 7708, 7709, 7710, 7711, 7719, 7720, 7721, 7722, 7729, 773, 7740, 7741, 7742, 7749, 7750, 7751, 7752, 7759, 7760, 7761, 7762, 7763, 7764, 7769, 777, 7780, 7781, 7782, 7789, 7790, 7799, 7802, 7824, 7841, 7901, 9602, 9990, 9998

**Supplementary Table 1.** Associations of IQ score with educational and occupational achievement.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Cohort** |  | **Within sibship** |
|  | b (SE) | p value |  | b (SE) | p value |
| **Unadjusted associations** |  |
| GPA in lower secondary school (N=93,458 → 44,677 sibships) |  |
|  IQ  | 0.128 (0.001) |  |  | 0.093 (0.001) |  |
|  IQ2 | -3.55x10-5 (1.99x10-5) |  |  | -8.82x10-5 (2.73x10-5) |  |
|  IQ3  | -1.87x10-5 (8.13x10-7) | <0.001 |  | -1.54x10-5 (9.71x10-7) | <0.001 |
| Social benefits at ages 18-30 (N=108,855 → 52,211 sibships) |  |  |
|  IQ  | -0.027 (0.001) |  |  | -0.014 (0.001) | <0.001 |
|  IQ2  | 1.42x10-4 (3.04x10-5) | <0.001 |  | - |  |
| Log of gross income at age 30 (N=228,817 → 108,552 sibships) |  |
|  IQ  | 0.003 (1.67x10-4) |  |  | 0.003 (2.74x10-4) |  |
|  IQ2 | -8.64x10-5 (9.54x10-6) | <0.001 |  | -5.56x10-5 (1.27x10-5) | <0.001 |
| **Adjusted associations\*** |  |
| GPA in lower secondary school (N=93,458 → 44,677 sibships) |  |
|  IQ  | 0.118 (0.001) |  |  | 0.094 (0.001) |  |
|  IQ2 | -4.58x10-5 (1.95x10-5) |  |  | -8.05x10-5 (2.72x10-5) |  |
|  IQ3  | -1.78x10-5 (7.90x10-7) | <0.001 |  | -1.58x10-5 (9.69x10-7) | <0.001 |
| Social benefits at ages 18-30 (N=108,855 → 52,211 sibships) |  |  |
|  IQ  | -0.017 (0.001) |  |  | -0.011 (0.001) | <0.001 |
|  IQ2  | 1.00x10-4 (3.13x10-5) | 0.001 |  | - |  |
| Log of gross income at age 30 (N=228,817 → 108,552 sibships) |  |
|  IQ  | 0.002 (1.97x10-4) |  |  | 0.002 (3.18x10-4) |  |
|  IQ2 | -3.63x10-5 (1.08x10-5) | 0.001 |  | -4.23x10-5 (1.30x10-5) | 0.001 |

\*Adjusted for year of birth, ethnicity, birth region, parental education at birth, out-of-home care in childhood, psychiatric diagnoses in childhood, neurological diagnoses in childhood, and perinatal diagnoses and congenital deformities.

IQ indicates a linear IQ term, IQ2 indicates a quadratic IQ term, and IQ3 indicates a cubic IQ term.

Missing values have been imputed by use of multiple imputation.

**Supplementary Figures 1-3**



**Supplementary Figure 1.** Grade point average according to IQ.

Association is adjusted for year of birth, ethnicity, birth region, parental education at birth, out-of-home care in childhood, psychiatric diagnoses in childhood, neurological diagnoses in childhood, and perinatal diagnoses and congenital deformities.



**Supplementary Figure 2.** Hazard ratio for social benefits according to IQ.

Association is adjusted for year of birth, ethnicity, birth region, parental education at birth, out-of-home care in childhood, psychiatric diagnoses in childhood, neurological diagnoses in childhood, and perinatal diagnoses and congenital deformities.



**Supplementary Figure 3.** Gross income according to IQ.

Association is adjusted for year of birth, ethnicity, birth region, parental education at birth, out-of-home care in childhood, psychiatric diagnoses in childhood, neurological diagnoses in childhood, and perinatal diagnoses and congenital deformities.

**Supplementary Table 2.** Associations of IQ score with educational and occupational achievement.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Cohort** |  | **Excluded individuals** |
|  | b (SE) | p value |  | b (SE) | p value |
| GPA in lower secondary school (N=93,458/N=207,090) |  |
|  IQ  | 0.118 (0.001) |  |  | 0.117 (4.81x10-4) |  |
|  IQ2 | -4.58x10-5 (1.95x10-5) |  |  | -7.07x10-5 (1.34x10-5) |  |
|  IQ3  | -1.78x10-5 (7.90x10-7) | <0.001 |  | -1.77x10-5 (6.16x10-7) | <0.001 |
| Social benefits at ages 18-30 (N=108,855/N=251,381) |  |  |
|  IQ  | -0.017 (0.001) |  |  | -0.017 (4.37x10-4) |  |
|  IQ2  | 1.00x10-4 (3.13x10-5) | 0.001 |  | 4.95x10-5 (2.16x10-5) | 0.02 |
| Log of gross income at age 30 (N=228,817/N=571,596) |  |
|  IQ  | 0.002 (1.97x10-4) |  |  | 0.003 (1.34x10-4) |  |
|  IQ2 | -3.63x10-5 (1.08x10-5) | 0.001 |  | -3.52x10-5 (5.83x10-6) | <0.001 |

Associations are adjusted for year of birth, ethnicity, birth region, parental education at birth, out-of-home care in childhood, psychiatric diagnoses in childhood, neurological diagnoses in childhood, and perinatal diagnoses and congenital deformities.

IQ indicates a linear IQ term, IQ2 indicates a quadratic IQ term, and IQ3 indicates a cubic IQ term.

Missing values have been imputed by use of multiple imputation.