

**Report prepared by**

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Constructed SES Variables



Data Dictionary

Social Origins Score¹ (SESPC_AL)

We measured social origins of Add Health Study members from information about their families collected from Add Health participants' parents at the Wave I interview, when participants were still in middle or high school. We examined reports of parental education, parental occupation, household income, and household receipt of public assistance. These four measures were correlated ($r > 0.19$). We conducted principal components analysis of the measures to produce a factor score². The first principal component explained 53% of the variance. We used loadings on this component to compute the Social Origins Factor Score. Values were Z-transformed to have $M=0$ $SD=1$ for analysis.

Occupational Prestige Score¹ (WARHAUS)

We measured social attainments of Add Health Study members from their occupations reported on the Wave IV survey, when participants were in their late 20s and early 30s. *Occupational attainment* was coded using the Hauser and Warren Occupational Income and Occupational Education scales³. The scale scores were averaged to compute a total socioeconomic index. At the Wave IV interview in 2007-8, Add Health respondents reported their current or most recent occupation, which was coded by Add Health using the SOC2000 coding scheme. We converted SOC2000 codes to Occupational Income and Occupational Education scale values using the cross-walk provided by the Wisconsin Center for Demography and Ecology⁴. Values were Z-transformed to have $M=0$ $SD=1$ for analysis.

Belsky DW^{¶*}, Domingue BD[¶], Weedow R, Arseneault L, Boardman J, Caspi A, Conley DC, Fletcher J, Freese J, Herd P, Moffitt TE, Poulton R, Sicinski K, Wertz J, Harris KM. Genetic analysis of social-class mobility in five longitudinal studies. [Proceedings of the National Academy of Sciences \(Plus\) USA](#), 115(31):E7275-84, 2018. PMC29987013

Acknowledgment

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Data Dictionary

W1 and W4 Neighborhood Socioeconomic Disadvantage⁵ (NHOOD1_D & NHOOD4_D)

We measured neighborhood-level socioeconomic disadvantage using Census-tract-level data linked to Add Health participants' addresses when they were first interviewed in 1994-1995 and when they were most recently followed-up in 2007-8. Participants' 1994-1995 addresses were linked with tract-level data from the 1990 Decennial Census⁶. Participants' addresses in 2007-2008 were linked with tract-level data from the 2005-2009 panels of the American Community Survey⁷. For each tract, we coded proportions of female-headed households, individuals living below the poverty threshold, individuals receiving public assistance, adults with less than a high school education, and adults who were unemployed using the

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following system: We computed tract deciles based on the full set of tracts from which Add Health participants were sampled at Wave 1. We then scored each tract on a scale of 1-10 corresponding to the Wave 1 decile containing the tract's value on the variable. We calculated neighborhood deprivation as the sum of decile scores across the five measures resulting in a score ranging from 0 to 50. Values were Z-transformed to have $M=0$ $SD=1$ for analysis.

Belsky DW*, Caspi A, Corcoran D, Domingue B, Harris KM, Arseneault L, Houts R, Mill J, Moffitt TE, Prinz J, Sugden K, Wertz J, Williams BS, Odgers CL. Genetics and the geography of health, behavior, and attainment. [Nature Human Behaviour](#), Published online April 8, 2019. PMC6565482

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References

1. Belsky, D. W. *et al.* Genetic analysis of social-class mobility in five longitudinal studies. *PNAS* 201801238 (2018) doi:10.1073/pnas.1801238115.
2. Stacklies, W., Redestig, H., Scholz, M., Walther, D. & Selbig, J. pcaMethods--a bioconductor package providing PCA methods for incomplete data. *Bioinformatics* **23**, 1164–1167 (2007).
3. Hauser, R. M. & Warren, J. R. Socioeconomic indexes for occupations: A review, update, and critique. *Sociological methodology* **27**, 177–298 (1997).
4. Frederick, C. A Crosswalk for using Pre-2000 Occupational Status and Prestige Codes with Post-2000 Occupation Codes. <https://www.ssc.wisc.edu/cde/cdewp/2010-03.pdf> (2010).
5. Belsky, D. W. *et al.* Genetics and the geography of health, behaviour and attainment. *Nature Human Behaviour* 1 (2019) doi:10.1038/s41562-019-0562-1.
6. Billy, J. O., Wenzlow, A. T. & Grady, W. R. User documentation for the add health contextual database. *Seattle: Battelle, Centers for Public Health Research and Evaluation* (1998).
7. Morales, L. & Monbureau, T. Add Health Wave IV Contextual Data. (2013).