

README file for “Same dataset, different conclusions: Preschool delay of gratification predicts later behavioral outcomes in a preregistered study”

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This file describes the data analysis process for “Same dataset, different conclusions: Preschool delay of gratification predicts later behavioral outcomes in a preregistered study.” This study was a secondary analysis of the NICHD Study of Early Child Care and Youth Development (SECCYD).

To replicate the analyses described in the paper, one must first obtain access to the restricted dataset and identify the appropriate analysis data set (ADS) files (see Dataset Information below). Next, the three attached scripts should be run in the order they are listed. The first (“01_DataPrepAndRegressionModels_share.R”) is an R script that merges key variables from the ADS files into a single analysis dataset, cleans and transforms the data, creates composite variables, and runs the bivariate and regression analyses reported in Tables 2 and 3. The second (“02_MungingForMultilevelModels_share.R”) is an R script that prepares the data for the multilevel models. The third (“03_MultilevelModels_share.do”) is a Stata Do-File for the multilevel models in Tables 4 and 5 of the main text and Table S4 of the SOM-U material.

Project Information

Dataset Name: NICHD SECCYD

Principal Investigators: The NICHD Study of Early Child Care and Youth Development was conducted by a network of investigators called the NICHD Early Child Care Research Network. The network was led and managed by a steering committee that included an independent chairperson, one representative from each of the grantee sites, one representative from the data center, and one representative from NICHD. The steering committee established policies and procedures that governed the operations of the network. The progress of the study was monitored by NICHD and by the steering committee with guidance from an advisory board which was nominated by the director of NICHD.

Study Purpose: The purpose of the SECCYD was to examine the influence of variations in early childcare histories on the psychological development of infants and toddlers from a variety of family backgrounds. See <https://www.nichd.nih.gov/research/supported/seccyd/overview> for additional details. The present study was a secondary analysis of SECCYD data intended to replicate and extend the predictive validity of the preschool marshmallow test for life success.

Geographic Coverage: Arkansas, California, Kansas, Massachusetts, North Carolina, Pennsylvania, Virginia, Washington, Wisconsin

Study Design and Sample: The SECCYD was a four-phase, multi-site, prospective, longitudinal study of the experiences of 1,364 children and their families. The universe of participants consisted of full-term, healthy newborns of mothers giving birth in hospitals at 10

locations throughout the United States during designated 24-hour periods between January and November 1991. Respondents were sampled from a catchment of some 6,189 children in accordance with a conditionally random sampling plan designed to ensure that the recruited families (a) included mothers who planned to work or to go to school full-time (60 percent) or part-time (20 percent) in the child's first year, as well as some who planned to stay at home with the child (20 percent), and (b) reflected the demographic diversity (economic, educational, and ethnic) of the sites. Both two-parent and single-parent families were included. The major exclusionary criteria used were (a) mothers younger than 18 years of age at the time of the child's birth, (b) families who did not anticipate remaining in the catchment area for at least 3 years, (c) children with obvious disabilities at birth or who remained in the hospital more than 7 days postpartum, and (d) mothers not sufficiently conversant in English. The initial sample for the present study consisted of the 961 children who completed a laboratory-based marshmallow test of delayed gratification at age 54 months.

Method of Data Collection: Children's development was assessed approximately annually from infancy through age 15 using clinical, observational, and survey data via trained observers, interviewers, questionnaires, and direct testing. Measures were taken on many facets of children's development, such as social, emotional, intellectual, as well as language development, behavioral problems and adjustment, and physical health. Informants included children's parents, teachers, caregivers, friends, and friends' parents.

Citations:

United States Department of Health and Human Services. National Institutes of Health. Eunice Kennedy Shriver National Institute of Child Health and Human Development. NICHD Study of Early Child Care and Youth Development: Phase I, 1991-1994 [United States]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-06-25.
<https://doi.org/10.3886/ICPSR21940.v6>

United States Department of Health and Human Services. National Institutes of Health. Eunice Kennedy Shriver National Institute of Child Health and Human Development. NICHD Study of Early Child Care and Youth Development: Phase II, 1995-1999 [United States]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-06-25.
<https://doi.org/10.3886/ICPSR21941.v5>

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<https://doi.org/10.3886/ICPSR21942.v6>

United States Department of Health and Human Services. National Institutes of Health. Eunice Kennedy Shriver National Institute of Child Health and Human Development. NICHD Study of Early Child Care and Youth Development: Phase IV, 2005-2007 [United States]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-06-25.
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Dataset Information

Data Production: The initial phase of the SECCYD was conducted by the Quantitative Systems Laboratory (QSL) at Vanderbilt University, while the final three stages were conducted by Research Triangle Institute (RTI) International. Composite variables were created from the raw data by QSL at Vanderbilt University to be psychometrically and distributionally acceptable for analysis of the study hypotheses.

Data Distribution: Inter-university Consortium for Political and Social Research (ICPSR)

Data File Organization: Data from the SECCYD series are organized by assessment period into four phases: SECCYD Phase I, 1991-1994 (ICPSR 21940), SECCYD Phase II, 1995-1999 (ICPSR 21941), and SECCYD Phase IV, 2005-2007 (ICPSR 22361). Within each phase, data files fall into one of three main groups:

- Analytical Data Sets (ADS) containing composite variables created from the raw data by QSL at Vanderbilt University to be psychometrically and distributionally acceptable for analysis. The raw data were examined and composites defined by small groups of individual principal investigators according to the demographic, family, childcare, and child outcome content of the data. The psychometric and distributional qualities of the variables, along with site differences, were then examined and a set of composite variables was designed to test the study hypotheses.
- Supplemental Data Sets were produced by RTI and contain new and revised analysis variables, across-time mean scores, and primary composites.
- Raw Data Sets contain the direct item-level data collected per instrument.

The present study utilized the following nine ADS files from the SECCYD data files available:

da21940-0011_ADS-COUT54.csv
da21940-0011_ADS-COUTG1.csv
da21942-0029_ADS-COUTG5.csv
da22361-0012_ADS-COUTX5.csv
da21941-0023_ADS-TCHRG1.csv
da21942-0031_ADS-FAMG5.csv
da21942-0034_ADS-TCHRG5.csv
da22361-0014_ADS-FAMX5.csv
da22361-0010_ADS-SCHG9.csv

Data Restrictions: To protect respondent privacy, data files in the SECCYD collection are restricted from general dissemination. To obtain these restricted files, researchers must agree to the terms and conditions of a Restricted Data Use Agreement. SECCYD data may not be used for any purpose other than statistical reporting and analysis.

Restricted-Use Data Access: Data access was granted to the present study first author through a secure dissemination of the microdata following the conditions of a Restricted Data Use Agreement, which was formalized upon completion and approval of a Data Access Request submitted through the ICPSR MyData portal (<https://www.icpsr.umich.edu/rpxlogin>). Applicants should be prepared to provide the following materials:

- Completed Investigator Information form, including a project description supporting need to access the data and a roster of research staff who will access the data; may need to include IT staff able to view the data or access the computer where the data are hosted
- Agreement for the Use of the NICHD SECCYD Restricted-Use Data, signed by the Investigator and a legal representative of the institution
- Supplemental Agreement with Research Staff, if applicable, for the Use of the NICHD SECCYD Restricted-Use Data
- Data Security Plan proposed by the Investigator and approved by ICPSR
- A copy of the document uploaded to the MyData portal, originated by the Investigator and signed by the Investigator's Institutional Review Board (IRB), approving or exempting the research project and the secure use, storage, and handling of the NICHD SECCYD Restricted-Use Data as outlined in the Data Security Plan
- Non-refundable fee of \$100 (ICPSR member institution)/\$150 (ICPSR non-member institution) in the form of a check made payable to "ICPSR" to cover the expenses of producing and shipping data files and documentation, and of administering the Agreement