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PANEL STUDY OF INCOME DYNAMICS

Panel Study of Income Dynamics, Child Development Supplement 2019: User Guide

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Abstract

The 2019 Child Development Supplement (CDS-2019) to the Panel Study of Income Dynamics (PSID) collected data for a nationally representative sample of children in the United States on their health, development, and well-being within family and neighborhood context. CDS-2019 builds on the strengths of PSID, a genealogical study of US families that began in 1968. In 2019, the CDS sample covered all children aged 0–17 years in PSID families. CDS-2019 included reinterviews with many children aged 5–17 years who participated in the first wave of the new, ongoing CDS in 2014. (Children from the original CDS, conducted between 1997 and 2007, had all reached adulthood by the time of the CDS relaunch in 2014.) The CDS-2019 interview content is highly comparable across all waves of the original and ongoing CDS. Study components included time diaries, assessments of reading and math skills, and interviews with children's primary caregivers as well as with older children themselves. Several study components were completed during home visits that typically occurred after the completion of telephone interviews with primary caregivers and older children. Home visits were ended by the Covid-19 pandemic in March 2020, after about one-third of visits had been completed. A follow-up effort to collect components from the home visit through remote administration occurred in Fall 2020. This follow-up effort—called CDS-2020—covered all cases from CDS-2019 that had not received a home visit and included a new telephone update interview. The data from CDS-2020 are available in a data release separate from CDS-2019. All CDS data are publicly available free of charge through the PSID Online Data Center (www.psidonline.org) and the CDS Online Data Center (www.cds-tas.org). CDS-2019 sensitive data are available to researchers through a special application procedure and restricted data are available through a contract. This User Guide provides essential information to researchers planning or undertaking research using the CDS-2019 data.

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Preface

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CDS-2019 was directed by Narayan Sastry, with Paula Fomby serving as the associate director. Yi-Miau Tsai was the CDS-2019 project manager. PSID investigators who provide input at key stages of the project include Katherine McGonagle and David Johnson. Valuable input and support at several stages was provided by Dalton Conley, Pamela Davis-Kean, Colter Mitchell, and Jacquelynne Eccles.

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1. INTRODUCTION

The Child Development Supplement (CDS) to the Panel Study of Income Dynamics (PSID) is designed to support research on the social, psychological, and economic aspects of childhood within children's family and neighborhood context. CDS collects data on psychological and social wellbeing, health status and behavior, family environment, education, child care, time use, sibling relationships, caregiver social and psychological resources, non-coresident parents, future work and schooling expectations, and religiosity. CDS data support studies of health, development, and well-being in childhood; the relationship between children's characteristics and contemporaneous family decisionmaking and behavior; and the effects of childhood factors on subsequent social, demographic, economic, and health outcomes over the entire life course for these individuals as they are followed into the future as part of the ongoing Core PSID.

CDS-2019 provides rich, comprehensive, and up-to-date panel data on a large, nationally representative sample of children that includes an over-sample of African American children and a representative sample of immigrant children. Public use data are available free of charge through the CDS Online Data Center (www.cds-tas.org) and the PSID Online Data Center (www.psidonline.org), which provide customized extracts and codebooks using a detailed index of variables. Sensitive information from CDS-2019 adolescent interviews are available through a special application procedure that requires a brief research plan and documentation of IRB review and approval (https://simba.isr.umich.edu/restricted/ChildReportSensitive.aspx); these data will be publicly released when all adolescents who reported sensitive data in CDS-2019 reach age 18 years. Restricted data, which include school identifiers and geocoded data about residential locations, are available to researchers through a data contract. Visit the PSID website for more information on obtaining access to sensitive and restricted data from CDS-2019 (http://simba.isr.umich.edu/restricted/RestrictedUse.aspx).

There are several unique features of CDS-2019 that will provide many important research opportunities to analysts. First, because the CDS children's parents are also participants in PSID, there is an enormous amount of data available from previous waves of Core PSID on many aspects of their lives—as well as the lives of parents' parents (the CDS-2019 children's grandparents). These data can be combined to study intergenerational transmission of human and social capital as well as health status. Information is available in CDS-2019 on siblings and cousins, providing unique research opportunities. Second, many of the CDS-2019 children were born to members of the original CDS cohort, providing unique opportunities to examine intergenerational connections in child development and behavior. Third, the original CDS and the new, ongoing CDS waves in 2014 and 2019 will allow researchers to study cohort differences in development between children born from 1985 to 1996 and those born from 1997 to 2018, as well as differences between younger and older members of these cohorts. Fourth, as CDS-2019 children move into adulthood, they will be interviewed in the PSID Transition into Adulthood Supplement in 2021 and beyond, and will also become primary PSID respondents. The information collected in CDS provides invaluable insights into the effects of childhood experiences and circumstances on later adult development and on adult social, demographic, economic, and health outcomes. Finally, the genetic markers from CDS will allow researchers to address a number of important scientific questions that span the interests of population geneticists and social scientists.

In this chapter, we provide background on PSID and CDS, an overview of CDS-2019, information about CDS-2020, and an outline of this user guide.

Background of CDS and PSID

CDS is part of the Panel Study of Income Dynamics, a longitudinal survey of a nationally representative sample of US families that began in 1968.[1] The original 1968 PSID sample came from two sources: a nationally representative sample of approximately 3,000 families designed by the Survey Research Center at the University of Michigan (the "SRC sample") and an over-sample of approximately 2,000 low-income families from the Survey of Economic Opportunity (the "SEO sample"). PSID interviewed individuals from families in these two samples every year from 1968 to 1996 and biennially thereafter—whether or not they were living together in the same dwelling. In 1997, because of the escalation in costs driven by the doubling of the sample size during its 30-year history, PSID was forced to drop some families from the study. The cuts were made from the SEO sample. In 1997 and again in 2017, representative samples of new immigrants to the US were added to PSID.

The original CDS began in 1997 with a cohort of 3,563 children from 2,394 families. The cohort included up to two randomly selected children aged 0–12 years in each family. Interviews were conducted with the children's primary caregivers (PCGs; usually the children's mother). Eligible CDS participants in 1997 were descended from the original 1968 PSID sample or the 1997 PSID immigrant refresher sample. In most cases, this means that the child's father or mother was the child or grandchild of an original PSID respondent. In 2002/2003, CDS families who participated in the 2001 Core PSID were contacted for a second round of data collection. CDS-II successfully re-interviewed 2,019 families (91%) who provided data on 2,907 children and adolescents aged 5–18 years. During 2007/2008, 1,506 children aged 10–19 years were successfully re-interviewed (90%).

By 2014, all children in the original 1997 CDS cohort had reached adulthood, and a new generation of children had replaced them in PSID families. CDS-2014 sought to collect information on all PSID children aged 0–17 years in this new generation. The CDS-2014 sample included all PSID families that completed a Core PSID interview in 2013 and had one or more resident children. All eligible PSID children in each family were selected for CDS-2014, in contrast to the limit of two children per family in the original CDS. CDS-2014 participants form a nationally-representative sample of children descended from the original 1968 families and the 1997 new immigrant refresher sample. (The CDS-2014 sample did not cover children from families in which both parents are post-1997 immigrants to the US.) CDS-2014 was primarily a telephone interview; however, a random 50 percent of households were selected to receive an in-home visit to collect information that could not be obtained reliably by telephone, including reading and math assessments for children (and reading assessments for PCGs), time diaries for a random weekday and a random weekend day, and interviews with children aged 8–11 years. The in-home visits facilitated the collection of other study components that were otherwise collected using a mail-out/mail-back protocol, including saliva samples for subsequent genotyping and anthropometric measurements.

CDS-2019 Overview

CDS-2019 sought to collect information on all PSID children aged 0–17 years, and to continue the shift in orientation from a study of a single cohort (from the original CDS) to a study that obtains information on the childhood experiences of all children in PSID families at regular

[1] McGonagle, K., Schoeni, R., Sastry, N., and Freedman, V. (2012). The Panel Study of Income Dynamics: Overview, Recent Innovations, and Potential for Life Course Research. *Longitudinal and Life Course Studies,* 3, 268–284.

intervals. The CDS-2019 sample included all age-eligible children from CDS-2014 (i.e., those aged 5–17 years in 2019) whose families participated in the 2019 wave of PSID, whether or not they participated in CDS-2014, and also added newly age-eligible children (i.e., those aged 0–4 years in 2019).

The CDS-2019 interview design and content drew heavily on previous waves of CDS. The study focused initially on completing telephone interviews with primary caregivers and older adolescents aged 12–17 years. After the telephone interviews were completed, all families were eligible for a home visit. Among the measures collected in the home visit were reading and math assessments for children (and reading assessments for PCGs), time diaries for children, interviews with children aged 8–11 years, anthropometric measurements, and collection of saliva samples for subsequent genetic sequencing for children, primary caregivers, and other adults in the household.

A team of approximately 100 interviewers located around the country was recruited and trained for CDS-2019 and data collection began on 1 October 2019. Fieldwork began with approximately 1,600 PSID families that had completed their 2019 Core PSID interview earlier in the year. Additional cases were released to the field for CDS-2019 as they completed their Core PSID interviews. Home visits to collect the in-person components of CDS-2019 began with CDS cases that completed their telephone interviews and were located near to interviewers or in large clusters if travel by interviewers was required. Following the completion of fieldwork for Core PSID on 31 December 2019, the final set of cases for CDS-2019 were released to the field in early February 2020.

On 14 March 2020, due to the Covid-19 pandemic, CDS-2019 halted all home visits.[2] At that time, telephone interviews had been completed with about three-quarters of primary caregivers and adolescents aged 12–17 years. Home visits had been completed with approximately 900 families. Because of the ongoing pandemic, there was no opportunity to restart the home visits. Instead, only telephone interviewing of primary caregivers and adolescents was continued, through May 2020 when all CDS-2019 fieldwork ended.

CDS-2020 Overview

To replace the home visits from CDS-2019 that could not be undertaken due to the Covid-19 pandemic, the project instead planned and implemented a follow-up effort for the fall of 2020 that is called CDS-2020. The goal of CDS-2020 was to complete the collection of most, but not all, items originally included in the CDS-2019 home visit through a telephone interview and a mail-out/mail-back protocol. The targeted items for remote collection included weekday and weekend time diaries for children, saliva samples from children, PCGs, and other adults for subsequent genetic analysis, anthropometric measurements, and record linkage consent forms. In addition, we designed a short new Covid-19 telephone questionnaire module for PCGs. This module collected information about the disease incidence of Covid-19 among family members, financial effects of the pandemic, and the consequences for child and family well-being—including food insecurity, mental health, summer activities, and home schooling. Excluded from the CDS-2020 were the assessments of reading and math skills and interviews with children aged 8–11 years. These items were excluded because it was infeasible to collect them through a telephone or mail-out/mail-back protocol. Fieldwork for CDS-2020 began on 18 September

[2] See Sastry, N., McGonagle, K. and Fomby, P. (2020) Effects of the COVID-19 crisis on survey fieldwork: Experience and lessons from two major supplements to the US Panel Study of Income Dynamics. *Survey Research Methods*, 14(2), 241–245.

2020 and ended on 31 December 2020. A separate data release, box-and-arrows questionnaire, and user guide are available for CDS-2020.

Overview of the CDS-2019 User Guide

The purpose of this User Guide to CDS-2019 is to provide information about the study design, questionnaire instrument and measures, fieldwork outcomes, data structure, and relationship with Core PSID and other components of PSID. In Chapter 2, we provide a brief description of the CDS-2019 questionnaire instrument content. In Chapter 3, we provide an outline of the CDS-2019 sample. In Chapter 4, we describe the CDS-2019 data file structure and the procedures for merging files. Finally, in Chapter 5 we describe the construction and use of the CDS-2019 weights.

2. THE CDS-2019 QUESTIONNAIRE, MEASURES, AND VARIABLES

In this chapter, we provide a brief overview of the CDS-2019 questionnaire. We begin by describing the general principles that guided the design and content of the CDS-2019 questionnaire. Next, we describe the questionnaire content domains and provide an overview of measures. We then describe variable naming conventions. Finally, we describe CDS-2019 questionnaire modules and their major sections in detail.

See the CDS Cross-Wave Variable Index for a comprehensive list of questionnaire items and scales available in CDS-2019 and prior waves. This index is available in the documents section of the PSID Online Data Center (https://psidonline.isr.umich.edu/Guide/documents.aspx) and the CDS Data Center (https://psidonline.isr.umich.edu/CDS/Guide/Documents.aspx).

General Principles for the CDS-2019 Questionnaire

- The 2019 PSID Child Development Supplement (CDS-2019) is designed to support research on children's cognitive, health, and social development in family and neighborhood context.

- Continuity with CDS-2014 and with CDS I–III (1997–2007). As much as possible, CDS-2019 questionnaires preserved the content of the questionnaires used in CDS-2014 and with the original CDS cohort. The description of individual questionnaire modules below includes information about items or content areas that were omitted, revised, or added during CDS-2019 questionnaire development.

- Updated and new content. As needed, CDS-2019 questionnaires were revised and updated to include content that reflects the current circumstances of children's family and neighborhood contexts. Key changes include:

    - A transition in CDS from using the Behavior Problems Index (BPI) to the Strengths and Difficulties Questionnaire (SDQ) for assessing children's personality and behavior. While the PCG-Child instrument maintained the complete BPI as a personality and behavior measures in CDS-2019, the instrument also included the administration of SDQ to a random subset of children to prepare for a future instrument switch. PCGs were asked the SDQ items for an age-eligible child (aged 3 years or older) only once, randomly selected among age-eligible children for each interview with the primary caregiver. Half of the PCGs were asked the SDQ questions first and the other half of the PCGs were asked the BPI questions first. Through this design, the complete PCG-reported SDQ measure is collected for one child per PCG-CHILD instrument, allowing the comparison with children's behavior measured by BPI in the same wave. The SDQ scales are introduced as new content in the Cross-Wave Variable Index.

    - Switched to WJ-IV (Woodcock-Johnson IV Tests of Achievement, Form B) and the parallel Spanish instrument (Batería IV Woodcock-Muñoz) for assessment of academic skills. These versions replaced the Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R) and Batería Woodcock-Muñoz Revisada, which were the assessment tools for CDS-2014 and CDS I-III. The switch ensures that the tests continue to be fair and suitable to assess reading and math achievement within the contemporary US population. This switch also

means significant changes in the instrument. Users should consider the implications of the instrument updates when using assessment data across CDS waves. The selection of tests continues from prior waves to include ACH 1 Letter-Word Identification, ACH 2 Applied Problems, and ACH 4 Passage Comprehension. In CDS-2019, ACH 5 Calculation was added. Parallel Spanish tests are Identificación de letras y palabras, Problemas aplicados, Comprensión de textos, and Cálculo. A summary of WJ-IV tests and scores is included in the Cross-Wave Variable Index.

  - Added identity questions to Section J: sexual health and activities. Children ages 12 and older were asked one question about their sexual orientation (J21A) and one question about their gender identity (J21B) using interactive voice response technology (IVR). The variables are denoted as sensitive data and available through a sensitive data application procedure (see https://simba.isr.umich.edu/restricted/ChildReportSensitive.aspx).

- Collecting age-relevant content. CDS-2019 collected information on all eligible children in PSID households who were born between 2002 and 2018. The universe for many items in the PCG's interview about each child (PCG-Child) is governed by child age and/or grade in school.

- Minimizing respondent burden. PCGs responded to two questionnaires during the telephone interview: the household interview (PCG-Household) and the child interview (PCG-Child). On average, PCGs completed the PCG-HH questionnaire in 30 minutes and the PCG-Child questionnaire in 60 minutes. The average PCG reported on 1.75 children during the PCG-Child interview. That is, for any individual child, the PCG-Child questionnaire took approximately 34.29 minutes to complete (60/1.75), with content depending on child age.

  Several strategies were developed to minimize interview length for respondents in larger families. First, some items that were previously asked about each child in the family individually were consolidated as family-level questions in the PCG-HH interview. These items are noted in the description of the questionnaire modules below. Second, content on children's contact with non-coresident parents and time in child care was collected using a grid in which the computerized interview instrument filled in relevant information for subsequent children when respondents indicated that information about one child also pertained to any other child in the family (e.g., two children in the family shared the same non-coresident biological parent or stayed with the same child care provider). Third, questionnaire content was streamlined to remove redundancy, ambiguity, and inefficiency.

Questionnaire Content Domains and Measures

Table 2.1 summarizes the content domains included in the CDS-2019 questionnaire. A more detailed description of each questionnaire module follows.

Table 2.1. CDS-2019 Content Domains

Content domain	Description of content
Health status & behaviors	Health-related limitations and chronic conditions; obesity; health care utilization & expenditures; nutrition; exercise; sleep; smoking; health insurance
Psychological & social well-being	Positive psychological development, social integration, social identity, social anxiety, behavior problems, strengths and difficulties, depression, self-esteem, worry, social well-being; risky behaviors, thrill seeking, anti-social behaviors; drug and alcohol abuse /dependence
Family environment	HOME scale for cognitive & emotional stimulation; parental warmth; household tasks; involvement, closeness, time spent and conflict with father, mother, and parent figures; household composition
Sibling relationships	Type and frequency of cooperation with, kindness towards, and helping behaviors towards siblings
Peer influence	Closeness to friends; friends' activities
Parental monitoring	Caregivers' knowledge of the child's whereabouts, activities, and associations; child disclosure of activities
Non-coresident parents	Frequency/types of activities with nonresident parents; conflict between resident and non-coresident parent
Child care	Type, frequency of use, and costs of arrangements for CDS children up to sixth grade.
Caregiver social & psychological resources	Rosenberg self-esteem scale; Kessler K6 30-day psychological distress scale; social support; parenting attitudes; aggravation in parenting; gender role beliefs; family conflict; economic strain; work schedules
Spending & savings	Variety of expenditures for child; savings mechanisms
Work & wages	Employment experiences for older children; job aspirations
Education	Parental expectations; enrollment; type of school; tuition; attendance; government lunch & breakfast programs; attended special class/school for gifted students; special education; repeated grade; dropped out
Work & education expectations	Economic expectations; occupational identity; job values, career orientation and expectations for future work and schooling
Computer & media use	Access to television, computers, smartphones, and other digital devices; frequency of television, computer, and social media use
Intellectual achievement and skills & abilities	Woodcock-Johnson IV Tests of Achievement (collected as part of home visits); ability self-concepts in reading and math
Time use	Activities with parents; extracurricular; part-time jobs; Time Diary measures of type, number, duration, and location of activities for weekday and weekend day

Variable Naming Conventions

This user guide refers to individual items by their names as they appear in the questionnaire, typically a one-letter section prefix followed by one or more digits in order of item sequence. For example, item J1 in the Primary Caregiver (PCG) Interview refers to the first item appearing in Section J: Neighborhood Measurements of the Household Interview. The questionnaires are downloadable under Documentation in the PSID Online Data Center (www.psidonline.org) and the CDS Online Data Center (www.cds-tas.org).

The response data associated with these questionnaire items appear as variables in the PSID Online Data Center (www.psidonline.org) and the CDS Online Data Center (www.cds-tas.org).

Variables associated with specific interview components are named using the following structure:

1. The leading character(s) refers to the study component from which the questionnaire item is drawn:

   H = PCG Household Interview
   P = PCG Child Interview
   C = Child Interview (interview completed by CDS child)
   A = Child Assessments
   X = Demographics
   D = Time Diary Questionnaire
   R = Roster
   WD/WE = Time Diary Aggregated Activity File
   COLA–COLJ = Time Diary Activity File (disaggregated)

2. The following two characters in the variable refer to the calendar year that data collection began. For variable names associated with CDS-2019, these characters are always "19." This scheme has been used since CDS-2014, but was not used consistently in earlier waves of CDS.

3. The remaining characters in the variable name refer to the location of the item in the questionnaire.

4. Generated variables (i.e., constructed scale scores, interview information like calendar dates, and other variables produced by PSID staff) adopt naming conventions (1) and (2). For these variables, the remaining characters typically use a mnemonic device to help users identify the variable's content. For example, the "Disagreement in Parenting" scale score, a generated variable constructed from responses to several component items in the PCG Household Interview, is named H19DISAGR. The list of generated variables is available on the CDS generated variables and scales tab in the CDS Cross-Wave Variable Index.

Description of Questionnaire Modules and Their Major Sections

Primary Caregiver Household Interview

The PCG Household (PCG-HH) Interview focuses on the characteristics of a child's family, household, and neighborhood. The interview also collects extensive information on the PCG's own psychological resources, social support, parenting stress, parenting style, and childrearing values. Unless otherwise noted, items in the PCG-HH interview were administered to all PCGs.

Topics included in the PCG-HH Interview are described below. The CDS Cross-Wave Variable Index documents the source and original author of questionnaire content where appropriate. Note that PCG-HH Interview content begins with Section J (Neighborhood Measurements). Sections A–H appear in the PCG-Child interview.

Neighborhood Measurements (Section J). Eight items assess the PCG's perception of neighborhood quality, including residential stability, residential satisfaction, neighborhood anonymity, social cohesion, and neighborhood safety. The series appears in the questionnaire as Items J1 to J8.

Rosenberg Self-Esteem Scale for Primary Caregivers (Section K). The Rosenberg Self-Esteem Scale measures global self-worth. The scale is widely used, with substantial documentation on its validity and reliability. PCGs reported on a series of 10 items using a response scale ranging from 1 to 4, where 1 indicates "Strongly Disagree" and 4 indicates "Strongly Agree." The series appears in the PCG-HH Instrument as Items K1 to K10. The scale score is computed as an average of responses to these ten items and is available for respondents who have valid values on at least eight items (H19SLFEST).

Childrearing Values (Section M). Respondents ranked the qualities or traits they consider most important to prepare a child for life from a set of five choices. Traits include obedience, popularity, autonomy, a strong work ethic, and altruism. The series appears in items M3A to M3D. These items appeared in the Detroit Area Study and the General Social Survey.

Aggravation in Parenting (Section M). The aggravation in parenting scale (M4–M10) measures parenting stress that may result from changes in employment, income, and other factors in the lives of PCGs. Items M4 to M7 address parenting in general. Items M8 to M10 focus on the PCG's feelings about his/her children in CDS collectively. The generated variable H19PARENT is a mean score derived from the seven items in the scale. A mean score was computed for all cases with valid values on at least five items.

Work/Life Adjustments for Children (Section M). In Items M11 to M13, PCGs reported whether they ever changed neighborhoods or employment to improve circumstances for their children.

Attitudes about Gender Roles (Section M). Items M14 to M27 measure the PCG's level of agreement with statements pertaining to gender role attitudes, including three statements drawn from the "Being a Father" Scale. These statements measure the constructs of traditional marriage values, traditional mothering values, equity, and father involvement. Each construct is represented by three variables.

Caregiver Psychological Distress (Section N). The Kessler 6 (K6) Non-Specific Psychological Distress Scale (N1–N6) was designed to discriminate cases of serious mental illness from non-cases in a general population survey. The K6 is administered to respondents is also included in the National Health Interview Survey and the National Household Survey on Drug Abuse, as well as in Core PSID.

The K6 includes six items about how the respondent felt during the prior four weeks. Response items are based on a scale from 1 to 5, where 1 indicates "all of the time" and 5 indicates "none of the time." Individual items may be rescored to range from 0 to 4 and then summed to calculate a total score that is comparable to other studies. A summed score of 13 or higher indicates a potential for nonspecific distress. The generated variable H19K6_14 is a sum score computed for all cases with valid responses to all six items in the scale.

The scale includes three follow-up items about persistence and impairment associated with symptoms of nonspecific distress (N7–N9). These items are administered to respondents who endorse any of the items in the K6 series. Responses to these additional items are not required in order to score the K6.

Perceived Social Support (Section N). Six items (N10–N15) describe the PCG's perceived practical and emotional support received from their spouse or partner, other family, and friends.

Family Pets (Section P). Section P includes seven questions about the number and types of pets in families and the PCG's interaction with and attitudes about his or her pets. The source of the items is the Center for the Study of Human-Animal Relationships and Environments Pet Attachment Scale.

Disagreement in Parenting and Joint Goals (Section Q). The Parental Disagreement Scale measures the extent of agreement on daily activities between a PCG and his or her spouse or partner (Q1–Q5). The items were administered only to PCGs who had a spouse or cohabiting partner in the household. The generated variable H19DISAGR is a mean score derived from the five items in the scale for all cases with valid values on at least four items. Three items measure the extent to which the PCG and his or her spouse or partner have joint goals for the future (Q6–Q8). Five items measure methods of conflict resolution among family members (Q9–Q13).

Food Security (Section R). The PCG-HH interview included an 18-item version of the US Household Food Security Survey Module developed by the Economic Research Service at the US Department of Agriculture (R1–R15). The module includes questions about various levels of food security such as worries about having enough food and enough healthy food, cutting back to conserve food, and running out of money for food. The module collects information about household (R1–R8) and child (R9–R15) food security separately. These data allow the food security status of CDS-2019 families to be defined along a continuum extending from high food security to very low food security. Generated variables associated with this series include raw scores summing the number of endorsed items pertaining to the household overall (H19HHFOODR) and separately for adults (H19ADFOODR) and children (H19CHFOODR). A parallel set of items describes the food insecurity status of the household overall (H19HHFOOD) and of adults (H19ADFOOD) and children (H19CHFOOD) in the household. A raw sum score (H19FOOD6R) and a food insecurity status indicator (H19FOOD6) based on a six-item subset of questionnaire items (R2–R6) are also available.

Home Environment (Section S). The Home Environment section collects information about children's access to learning resources and technology in the home, the PCG's involvement in her or his children's school and learning at home, and the PCG's own school enrollment, employment circumstances, and religiosity.

Children's Access to Technology. Topics in the PCG-HH include the types and number of electronic devices in the home, including televisions, computers, tablets, cellular telephones, and smart speakers (S1–S5, S14A–S14AA); shared television viewing habits (S9–S10); and household rules about television viewing (S11–S13) and use of other electronic devices (S14G–S14L). This section also includes an adapted 6-item web-use skills index originally developed by Hargittai and Hsieh to measure the PCG's familiarity with computer and internet-related terminology (S14N1–S14N6).[6]

Home Observation for Measurement of the Environment (HOME Scale). The HOME Scale measures characteristics of a child's home environment that are associated with cognitive development and emotional support. HOME Scale content in the PCG-HH interview includes questions about how often the family engages in specific activities together, including meals (M1), socializing (M2), and television viewing (S9–S10); the number of books in the home (including electronic books, S15–S16); and the number of books the PCG has read in the last year (S17–S18). Note that a calculated HOME Scale score is not provided.

School Involvement. Two items in the PCG-HH interview address the PCG's volunteer activities at his or her child(ren)'s school (S19–S20). Six other items addressing the PCG's school involvement are included in the PCG-Child interview.

Response to Poor Grades. Twelve items describe actions PCGs would expect to take in response to a child's poor grades (S21–S30B).

Own Schooling. PCGs report whether they are currently attending school, and if so, the number of hours they attend school each week and travel time (S31–S31B).

Employment Characteristics. PCGs report whether they are currently working, and if so, report on characteristics of their employment such as number of jobs, hours worked weekly, nonstandard work schedules, and commuting time (S32–S39).

Religiosity. PCGs reported how often they attended religious services in the past year (S39–S40) and on the importance of religion and spirituality in their lives (S41A–S42A).

Language Proficiency. PCGs report on their proficiency in English and use of other languages at home and in social settings (S43–S54).

Woodcock-Johnson IV Test of Achievement – Passage Comprehension. During the in-home interview, PCGs completed the Passage Comprehension test from the Woodcock-Johnson IV Tests of Achievement (WJ-IV), Form B. The Spanish version of the WJ-IV (Batería-IV Woodcock-Muñoz) was used for PCGs whose first language was Spanish and who elected to complete the assessment in that language.

The Passage Comprehension test measures understanding of written text. Respondents read a sentence or brief paragraph and provide the word that is missing from the passage. Indicators of whether a correct response was offered to each item are available. In addition, generated variables associated with the PCG passage comprehension assessment include a total raw score (H19PCRAW), a standardized score (H19PCSS), a percentile score (H19PCPR), and a W score (H19PCW).

The Woodcock-Johnson IV Test of Achievement and Batería-IV Woodcock-Muñoz replaced Woodcock-Johnson Revised Tests of Achievement (WJ-R) and Batería Woodcock-Muñoz Revisada used in earlier waves of CDS.

Assessment Observations. Interviewers recorded whether others were present during the administration of the Passage Comprehension assessment and whether anything out of the ordinary occurred that might have affected test administration or completion (ASOB1–ASOB5). The difficulty level in completing the assessment (ASOB4A) was added in CDS-2019.

Interviewer Observations (Section OB). Interviewers provided structured and open-ended observations on the interviews they conducted, on the respondents, and on the respondents' household environment.

PCG Household Interview Observations. Interviewers recorded their assessment of the respondent's verbal fluency, comprehension, and self-expression at the conclusion of the PCG telephone interview (PCGOB1–PCGOB5).

In-Home Observation. Where families were visited in person, interviewers reported their observations about the physical appearance and quality of the dwelling and the neighborhood (PCGOB6–PCGOB19). Question wording in this section was updated in CDS-2019 and scales were modified to provide anchors for each of the response categories.

Primary Caregiver Child Interview

Throughout the PCG-Child interview, questions are tailored to specific age groups of children to maximize question relevance and minimize recall error. See the questionnaire for age and/or school grade ranges for each item and for rules governing skip patterns. Child age and school grade are based on child characteristics at the time of the Coverscreen Interview to determine eligibility.

Child Health (Section A). Questions about the physical health of each child (A2–A19) are drawn from the National Health Interview Survey and from the National Longitudinal Survey of Youth. Topics include general health status, birth weight, breastfeeding, medical care, immunization status, diagnosis of chronic conditions, asthma, and disability. Questions in the A8 series (A8–A8Y) regarding psychological, developmental or behavior conditions were modified for CDS-2019.

Questionnaire items about birth weight are directed to PCGs only when the child's birth weight does not appear in the birth history collected as part of the PSID Core interview (A4–A4_KG). Where birth weight was already available, this information is provided in the CDS-2019 Demographics file (X19BWTP1–X19OS3B1 [biological mother report], X19BWTP2– X19OS3B2 [biological father report], X19BWTP3–X19OS3B3 [adoptive mother report], and X19BWTP4–X19OS3B4 [biological mother report]).

Information on breastfeeding duration is collected only where a CDS child is between ages 0 and 5 years at the time of the CDS Coverscreen Interview.

Psychological Wellbeing, Personality, and Behavior (Section B). Modules in this section include the Behavioral Problems Index, Strengths and Difficulties Questionnaire, positive behavior, prosocial behavior, and sibling interaction.

Behavior Problems Index. The 30-item Behavior Problems Index (BPI) was developed by James Peterson and Nicholas Zill from the Achenbach Behavior Problems Checklist to measure in a survey setting the incidence and severity of child behavior problems. In CDS-2019, the BPI was administered to PCGs of children who were between ages 3 and 17 years (B1–B30). Caregivers of children aged 6–17 years old responded to two additional items addressing children's behavior at school (B31–B32). PCGs indicated whether the behavior or trait described in each item in the series was often, sometimes, or never true of the child.

Overall scale scores and subscale scores for internalizing and externalizing behavior are included in the public-use data. To construct scale scores, responses from each item were collapsed into a corresponding two-category variable and coded "1" if the behavior described was often or sometimes true for the child and "0" if never true. These dichotomous variables were summed to calculate an overall behavior problems score. For children aged 3 years and older, the overall scale score includes 27 of the items in B1 to B30 (P19BPI_T) and excludes items B23, B28, and B29, which did not load on to either of the subscale scores. For children aged 6 years and older, a second overall scale score is available (P19BPI_T29). This 29-item score includes responses to items B31–B32 as well as each of the items included in P19BPI_T.

Subscale scores were constructed for externalizing behavior from a subset of 15 items (P19BPI_E15) for children aged 3 years and older. For children aged 6 years and older, a second externalizing behavior scale score is available (P19BPI_E), which includes responses to items B31 to B32 as well as each of the items included in P19BPI_E15. The internalizing behavior score for all children aged 3 years and older is constructed from a subset of 14 items (P19BPI_N).

Strengths and Difficulties Questionnaire. A transition to using the Strengths and Difficulties Questionnaire (SDQ) in place of the BPI to measure the incidence and severity of child and adolescent behavior problems began in CDS-2019. The SDQ is a 25-item behavior screening questionnaire designed to be completed by a knowledgeable adult to describe the behavior of children aged 3 years and older (www.sdqinfo.org). It measures children's behavior in the preceding six months. Response options range from 1 ("Not true") to 3 ("Certainly true"). In comparison to the BPI, the SDQ includes fewer items and measures a wider variety of behaviors. It has been used in many child development studies within and outside of the US, enabling national and cross-national comparison.

In CDS-2019, one CDS child in each family was randomly selected to receive the full 25-item SDQ series (B1A–B1H, B1J–B1Z). For the CDS child selected to receive both the BPI and the SDQ, the order of administration of the two modules was randomized. As indicated by P19SDQORD, SDQ questions were asked before the BPI series, after the BPI series, or not asked by design. Seven calculated scales are provided based of the SDQ items and scoring instruction. These includes SDQ Conduct Scale (P19SDQCIMP), SDQ Hyperactivity Scale (P19SDQHYP), SDQ Emotional Scale (P19SDQEMOT), SDQ Peer Relationships Scale (P19SDQPEER), SDQ Prosocial Behavior Scale (P19PROSOC; see note below), SDQ Externalizing Score (P19SDQEIMP), SDQ Internalizing Score (P19SDQN) and SDQ Total Difficulties Score (P19SDQIMP).

In CDS-2019, questionnaire item B1S1 was erroneously omitted in some PCG-CHILD Interviews and the raw score is missing on that item for 844 children aged 5–10 years. The raw score is substituted by item B4 from the BPI that taps into the same behaviors. The substituted raw score is used in order to provide a valid base for the calculation of the SDQ Conduct Scale (P19SDQCIMP) and SDQ Externalizing Score (P19SDQEIMP) and Total Score (P19SDQIMP). These variables are emphasized with the suffix "IMP" in the variable name and a variable P19SDQACC is created to flag whether B1S1 is reported or imputed.

SDQ Prosocial Behavior. The five-item SDQ Prosocial Scale was administered to all children aged 3–17 years. Responses for the child randomly chosen from each family to receive the SDQ series were recorded in items B1A, B1D, B1J, B1R, and B1U. For other age-eligible children not selected for the full SDQ administration, the five items were asked in B43–B47. The five SDQ variables in the public-release data (P19B1A, P19B1D, P19B1J, P19B1R, and P19B1U) pool responses across the two questionnaire locations. See the Cross-Wave Variable Index for corresponding items.

A prosocial behavior scale score is available (P19PROSOC) for all cases with a valid response to each of the five items in the scale.

Positive Behavior. The Positive Behavior Scale (PBS) measures positive aspects of children's behavior and disposition, including self-esteem, social competence, self-control, compliance, and persistence (B33–B42). The scale includes 10 items measured on a five-point scale. In CDS-2019, response categories are modified to include anchors for each of the categories.

Response options are “Not at all like child”, “A little like child”, “Somewhat like child”, “A lot like child” and “Totally like child.” Items remain identical in wording and sequencing to prior waves.

A positive behavior scale score is provided (P19POSBEH). The score is computed as the average value of the constituent items where the PCG provided at least valid responses to at least eight items.

Sibling Interaction. Five items describe the frequency of helping and prosocial behaviors expressed toward siblings, if any in the household (B48–B52, children aged 3–11 years).

Parenting and Family Interaction (Section C). Section C includes information about family routines, parental monitoring, household rules, discipline, and parent-child discussion topics. The universe for the items in this section varies depending on child age and grade. Many of these items characterize the aspects of children’s home environments that are conducive to cognitive development and emotional support.

Items pertaining to household rules were revised compared to CDS I–III in order to accommodate new response options. In all waves, respondents were asked about whether there were household rules governing a variety of activities, including where and how children spend their time, homework, and television viewing. Previously, the response options were limited to “Yes” (i.e., there are household rules) and “No” (i.e., there are no household rules). In order to better characterize how household rules are implemented, the response categories were expanded as follows: “Yes, clear rules that are enforced (1);” “Yes, general rules and they are monitored (2);” “Yes, there are rules, but child makes own choices (3);” and “No (there are no rules) (5).”

Non-Coresident Parent (Section D and Non-Coresident Parent Block). The Non-Coresident Parent modules are administered to PCGs where at least one biological or adoptive parent is not living in the child’s household at the time of interview. Content in Section D includes whether the child has another adoptive parent, stepparent, or parent figure in the household; whether the non-coresident parent is still living, and if not, when the parent died; when the child and the parent last lived together, if ever; and how often the parent and child communicate and visit. Questions are asked separately for mothers and fathers.

The Non-Coresident Parent Block collects information from the PCG about the nonresident parent of each CDS child. That is, when two children have different non-coresident biological parents, the Non-Coresident Parent Block collects information on each parent separately. Content includes the parent’s residential proximity, whether she or he has other children and/or is married; whether the parent is currently in jail or prison; and the PCG’s frequency of contact and conflict with the parent.

Home Environment (Section E). Section E includes information about children’s access to learning resources and technology at home and about children’s learning and social activities in the community. PCGs also report who paid for children’s fee-based activities such as arts instruction, athletics, and tutoring.

Response options to spending items differ from CDS-2014 and CDS I–III due to backcoding on some open-ended responses and to keep response categories consistent with those used with similar items elsewhere in the instrument (e.g., item E14, “Who paid [CHILD NAME]’s tutoring programs? Include contributions from family members or friends living elsewhere.”).

The Home Environment section also includes content on children's use of technology at home, including whether the child has their own electronic device or devices such as a computer, tablet, or cellular telephone or smartphone (E47A–E49B); frequency of activities such as homework and social interaction using electronic devices (E51–E55C); and recent help-seeking and help-giving associated with computer use at home (E57–E58).

In CDS-2019, additional follow-up questions were added to capture the frequency of everyday use of email and text messaging. An item on social media interaction (E56 in CDS-2014) was removed.

Child Education (Section F and Schools Block). Section F collected information on the PCG's educational aspirations and expectations for the CDS child (F2–F3) and the CDS child's educational history and current status. Content includes whether the child attended an early intervention preschool program such as Head Start (F4–F8); age at kindergarten entry (F9–F12); attendance at public and private schools (F14–F19); attendance in classes for gifted students (F20); classification as requiring special education (F21–F22); suspensions and expulsions (F23); grade retention (F24–F24A); school dropout (F25–F26); home schooling (F33); participation in subsidized meal programs at school F27–F32); PCG involvement at the child's school (F34–F38); and PCG involvement with the child's education at home (F39–F41).

The universe for the items in this section varies depending on child age and grade. Question wording is identical to CDS-2014 and CDS I–III. Response options to some items differ due to backcoding on some open-ended responses and to keep response categories consistent with those used with similar items elsewhere in the instrument (e.g., item F15C, "Who paid [CHILD's] private school expenses?").

Expenditures and Savings (Section G). Seven items measure frequency, amount, and conditions of children's receipt of an allowance (G1–G6). Eleven items measure family members' savings and investments on behalf of children, including savings for college (G7–G13, G20–G20A). Six items describe expectations about college expenses (G14–G19).

School Attended. For children age 5–18 and Grade PreK–12, information on the total number of schools ever attended by each child, including school where currently enrolled, and the name and location of each school. This information is matched to the Common Core of Data and Private Schools Survey databases maintained by the National Center for Education Statistics of the US Department of Education. Numeric school identifiers are available to qualified researchers under a restricted-use data agreement. Visit the PSID web site for more information on restricted-use agreements (http://simba.isr.umich.edu/restricted/RestrictedUse.aspx).

Child Care. For children in sixth grade and younger, PCGs describe arrangements in the past four weeks for all child care regularly provided by someone other than the PCG and his/her spouse or partner. This includes information on the type of arrangement (e.g., relative-based in-home care or childcare center), the number of days and hours a child is in care each week, and the cost of care.

Child Interview

Race and Ethnicity (Section A). Adolescents aged 12 years and older self-reported their racial identity (multiple responses) and ethnic origins or background (A1_1–A2D_1).

For confidentiality purposes, racial and ethnic origin/background categories endorsed by 10 or fewer respondents are not included in public release data. Original coded responses are available to qualified researchers under a restricted-use data agreement. Visit the PSID website for more information on restricted-use agreements (http://simba.isr.umich.edu/restricted/RestrictedUse.aspx).

See the Demographic File for parent-reported information on children's race and ethnicity for all children in CDS-2019.

Ability Self-Concepts in Math and Reading (Section B). The Ability Self-Concepts items (B2–B9) reflect two scales to self-assess ability in the domains of math and reading. In CDS-2019, scales were modified to provide anchors for each of the response categories.

Academic performance (Section B). Adolescents reported grades earned in the most recent completed semester in mathematics and English (B10–B11), current cumulative grade point average (B12), and grades earned in eighth grade (B14).

Future plans (Section B). Adolescents (11th grade and up, including high school leavers or graduates) described their aspirations and plans for college attendance and information about college provided by their high school; and plans to serve in the armed forces (B15–B32A).

Health (Section C). This section covers questions on general health status, depression, and physical development.

General health. Children aged 10 years and older reported on their general health status (C1); perceived weight status (C2); recent efforts to change or maintain weight through diet or exercise (C3–C5); and general emotional health (C6–C7).

Depression. Adolescents (aged 12 years and older) completed the Children's Depression Inventory (CDI) Short Form (C8–C17). The CDI is an assessment that rates the severity of symptoms related to depression or dysthymic disorder in children and adolescents.

To protect respondent privacy, interviewers directed adolescents to read the response options for each item to themselves in their response booklets and to provide the numeric code corresponding to the statement that best describes their feelings during the last two weeks. The interviewer presented the response options aloud only where the respondent did not have his or her response booklet available.

Physical development. Children age 10 years and older reported on the onset of puberty, including physical appearance relative to age peers; breast development and age at menarche for girls; and facial hair growth and voice changing for boys (C18–C25).

To present questions about physical development to children aged 10–11 years who were interviewed in person, interviewers handed the child an envelope containing show cards on which the questions and response options appeared. The child read each question and response options silently and then responded with the letter corresponding to the category best matching their answer.

Adolescents (age 12 years and older) responded to the same questions using their telephone keypad during a computerized interview administered using interactive voice response technology (IVR, see Section J below).

Questionnaire items appear in Section C for younger children and in Section J for adolescents. The corresponding variables in the public-use data file are C18–C25 and JC18–JC25. In addition, the variable series C18X to C25X pools responses to individual items across the two age groups. For example, item C18X includes responses to item C18 from children aged 10–11 years and to item JC18 from adolescents aged 12 years and older.

Social Relationships (Section D). Children describe how close they feel to parents, stepparents, friends, siblings, teachers, and other adults (D1A–D1F, D1I–D2, aged 8 years and older); help to siblings (D1G–D1H); friends' positive and negative behaviors (D3A–D3M, aged 10 years and older); and characteristics of and interactions with family pets (D4–D12, aged 8 years and older).

Personality and Behavior (Section E). This section includes modules on children's self-esteem, perseverance, and peer problems.

Self-Esteem. Children aged 10 years and older responded to a five-item version of the Rosenberg Self-Esteem scale that excluded negatively worded items (E1–E5). Four of the items appeared in the original Rosenberg scale. A fifth item, "I feel good about myself," is a positively-worded version of the statement "At times I think I am no good at all."

Perseverance. Children aged 10 years and older responded to a five-item scale measuring perseverance (E6–E10).

Employment (Section F). Adolescents aged 12 years and older described current and past summer employment, including occupation, industry, tenure, work hours, wages, and job satisfaction (F1A–F21PER) and job aspirations (F21_1–F25). Modified question wording and response options throughout the series in CDS-2019. A question was added in CDS-2019 about the number of jobs held in the last 12 months (F1A.)

Computers and Electronic Media Use (Section G). For children aged 8 years and older, the questions collected information on the electronic devices owned by children (G1–G3), internet access (G6–G7), computer/electronic device use for schoolwork, information-seeking, social interaction, and entertainment (G8–G21).

A 6-item web-use skills index adapted from Hargittai and Hsieh measures the child's familiarity with computer and internet-related terminology (G23A–G23F). One item assesses confidence in understanding new terms and words related to computers and the internet (G22).

Two items measure the exchange of assistance with computers or other electronic devices between the child and their PCG in the past 30 days (G24–G25).

In CDS-2019, the response options for frequency of daily use of email, text messages, and social media sites were modified. Response options include "Almost all of the time," "Several times a day," and "About once a day" (G18A2, G18B2, G18C2).

Financial Behavior (Section H). Three items collect information about the frequency, amount, and conditions of a child's allowance (H1–H3, aged 8 years and older). Six items address the amount and intended purpose of a child's own financial savings (H4–H9, aged 8 years and older). Children aged 12 years and older report on their own and their PCG's past-year charitable donations (H10, H11).

Sensitive Topics (Section J). Questions on sensitive topics were administered using interactive voice response (IVR) technology in order to ensure respondent privacy and minimize response bias during the telephone interview.

Some content from Section J of the Child Interview is available only through a special data application process. This content is denoted as sensitive data below. Information about how to obtain these sensitive data is available at https://simba.isr.umich.edu/restricted/ChildReportSensitive.aspx.

The introduction to the IVR interview included items on right- or left-handedness, self-reported age, and availability of the response booklet (J0A–J0C).

Peer Victimization and Bullying. Four items (J1A–J1D) address peer victimization and bullying. These items were drawn from work by Kochenderfer and Ladd. The scale was modified in CDS-2019 to combine "Every day or almost every day in the last month" as a one response option.

Dating. Four items pertain to respondents' experience with dating (J2–J4). These items were drawn from the National Longitudinal Study of Adolescent to Adult Health.

Physical development. Children aged 10 years and older reported on the onset of puberty, including physical appearance relative to age peers; breast development and age at menarche for girls; and facial hair growth and voice changing for boys. These items were drawn from Pubertal Development Scale (PDS). Adolescents responded to these items as part of the IVR interview.

Note that questionnaire items on physical development appear in Section J for adolescents (12 years and older) and in Section C for younger children. The corresponding variables in the public-use data file are JC18–JC25 and C18–C25. In addition, the variable series C18X to C25X pools responses to individual items across the two age groups. For example, item C18x includes responses to item C18 from children aged 10–11 years old and to item JC18 from adolescents aged 12–17 years.

Sexual Health and Activity (Sensitive Data). Adolescents reported on age at first sexual intercourse (J5–J7B), recent frequency (J8–J9), and lifetime number of partners (J10). All sexually active respondents report on frequency of condom use (J11); female respondents also report on use of birth control pills (J12–J13C). All respondents report on whether they have ever been tested for or diagnosed with a sexually transmitted infection (J14–J16A). Male and female adolescents responded to items about pregnancy experience (becoming pregnant or impregnating someone else), frequency, and outcomes (J16–J21). In CDS-2019, two questions were added to measure sex at birth (C18A), sexual orientation (J21A), and gender identity (J21B).

Risky Behavior (Sensitive Data). Adolescents reported on the frequency of behaviors including staying out past curfew, physically harming others, damaging property, bringing a weapon or drugs or alcohol to school, and truancy (J22–J34). The series also included questions about contact with law enforcement, including being stopped and questioned or arrested (J28–J29).

Tobacco, Drug, and Alcohol Use (Sensitive Data). Adolescents reported lifetime and past 30-day use of tobacco products, electronic cigarettes, alcohol, marijuana, inhalants, hallucinogens, prescription drugs taken without a prescription from a doctor, amphetamines, and tranquilizers (J35–J64A). In addition, respondents reported on frequency of heavy drinking, type of alcohol

most often consumed, and frequency of driving while intoxicated or riding with an intoxicated driver. Items were originally drawn from the National Longitudinal Study of Adolescent to Adult Health. Content updates were made in consultation with investigators from Monitoring the Future, an annual study of middle and high school students designed to track trends in adolescent substance use.

IVR Interview Experience. Adolescents responded to three items about the accuracy of their responses and the ease or difficulty of completing the IVR interview (J65–J67).

3. THE CDS-2019 SAMPLE

The CDS-2019 sample—and the PSID sample more generally—is designed to be representative of the corresponding US population of children and families. By design, PSID and CDS-2019 have certain gaps in coverage.

The CDS-2019 sample eligibility criteria were defined as follows:

- Family participated in the 2019 Core PSID survey.
- Child's reported birth year was 2002–2018.
- Child was classified as belonging to the PSID sample (i.e., has the "PSID gene").
- Child was not classified as a household reference person or the spouse/partner of a household reference person.

A total of 6,706 children were identified for the CDS-2019 sample. A total of 6,435 children were ultimately deemed to have been eligible for participation based on the criteria above. The remaining 271 cases were identified for the sample and released to the field but were later determined to have been ineligible and have received a final code as non-sample.

The CDS-2019 fieldwork proceeded in several stages. Interviewers began by attempting to contact families with eligible children and completing a "Coverscreen" that collected information about the household composition and the identity of the CDS-2019 sample children's primary caregiver (PCG; typically a parent). As shown in Table 3.1, for a number of cases interviewers were unable to locate the family (71 children), exhausted allowed number of contact attempts to reach the family (732 children), or reached the end of the field period without contacting the family (383 children). After families were successfully contacted, respondents could refuse to participate (522 children) and 17 had a language barrier that prevented any interview from being conducted. Finally, there were 81 children not released to the field due to an office error.

Table 3.1. CDS-2019 Fieldwork Outcomes

CDS-2019 Outcome	Count
Child data collected	4,629
Lost – family not located	71
Multiple contact attempts but not reached	732
Field period ended – respondent not reached	383
Refusal	522
Language barrier	17
Office error – incorrectly coded as ineligible or processing error	81
Non-sample – coded as ineligible	271
Total	6,706

In CDS-2019, information was collected on a total of 4,629 children from an eligible sample of (6,706 – 271 =) 6,435 children. The overall, unconditional response rate at the child level for CDS-2019 was 4,629 / 6,435 = 72 percent.

Indicators for CDS-2019 fieldwork outcomes are available in the PSID Online Data Center. The individual file variable ER34859 classifies interview outcomes for 6,684 cases. This variable includes information on 249 of the 271 non-sample cases shown in Table 3.1, but not 22 non-sample cases that were deleted outright from the sample during the Core PSID family composition editing. All non-sample cases are shown in Table 3.1 to capture the full set of fieldwork outcomes.

Children in CDS-2019 ranged in age from 0 to 17 years, as shown in Table 3.2 based on their year of birth and the dates of the CDS-2019 fieldwork. Table 3.2 also shows that the CDS-2019 sample was divided approximately evenly between males and females.

Table 3.2. Age and Sex of Children in CDS-2019

Birth Year	Males	Females	Total	Percent
2002	109	118	227	4.90
2003	131	117	248	5.36
2004	125	150	275	5.94
2005	143	141	284	6.14
2006	132	138	270	5.83
2007	127	149	276	5.96
2008	120	140	260	5.62
2009	154	150	304	6.57
2010	147	137	284	6.14
2011	126	127	253	5.47
2012	136	155	291	6.29
2013	136	126	262	5.66
2014	143	133	276	5.96
2015	146	142	288	6.22
2016	160	133	293	6.33
2017	129	139	268	5.79
2018	135	135	270	5.83
Total	2,299	2,330	4,629	100.00

4. THE CDS-2019 DATA FILE STRUCTURE

The CDS-2019 data package includes the following files:

1. 2019 Primary Caregiver Household Interview File (one record per interviewed primary caregiver, N=2,616)
2. 2019 Primary Caregiver Child Interview File (one record per child interview, N=4,615)
3. 2019 Child Interview File (one record per interviewed age-eligible child, N=1,583)
4. 2019 Child Assessment File (one record per assessed age-eligible child, N=1,254)
5. 2019 Time Diary Files
    a. 2019 Time Diary Activity File (one record per activity spell, N=61,314 activity spells)
    b. 2019 Time Diary Aggregated Activity File (one record per child with a completed time diary, N=1,541)
    c. 2019 Time Diary Questionnaire File (one record per child with a completed time diary, N=1,541)
6. 2019 Demographic File (one record per child, N=4,629)
7. 2019 Household Roster File (one record per household member listed in CDS-2019 roster, N=10,682)
8. Cumulative CDS ID Map File 1997-2019 (one unique record across all waves per CDS-selected child, primary caregiver, or other caregiver, N=19,644)

Table 4.1 summarizes these files according to the CDS-2019 individual for whom data are available and lists the number of records in each component/file.

Table 4.1. CDS-2019 Study Component Completion by Individual Sample Member Type

	CDS-2019 File								
Individual	**DEMOG**	**PCG-CHILD**	**CHILD**	**ASSESS**	**TD_QN**	**TD_AGG**	**TD_ACT**	**PCG-HH**	**HHROSTER**
Child									X
Age 0–2 years	X	X			X	X	X		X
Age 3–4 years	X	X		X	X	X	X		X
Age 5–7 years	X	X		X	X	X	X		X
Age 8–11 years	X	X	X	X	X	X	X		X
Age 12–17 years	X	X	X	X	X	X	X		X
PCG								X	X
Other HH members									X
Num. of records									
Total	4,629	4,615	1,583	1,254	1,541	1,541	61,314	2,616	10,361
With associated PCG/child record	4,622							2,598	

Primary Caregiver Household Interview (PCGHH2019)

The Primary Caregiver Household Interview is the only file provided at the primary caregiver (PCG) level, with one record per interviewed PCG (N=2,616).

In addition to the content from the Primary Caregiver Household Interview questionnaire, the file includes item responses and calculated scores from the Passage Comprehension subtest of the Woodcock-Johnson Standardized Tests of Achievement IV (WJ-IV), which was administered to primary caregivers who participated in the in-home interview component (which was suspended due to the Covid-19 pandemic on 13 March 2020 and did not resume).

Note that there are some CDS-2019 households that completed the Primary Caregiver Household Interview but did not complete any child-level study components (N=18 primary

caregivers). In addition, there are some CDS-2019 children with completed child-level interview components who do not have a corresponding PCGHH2019 interview (N=7 children). As a result, merged file content between the PCGHH2019 interview and child-level study components will not always yield a file with complete data for all fields for all individuals.

Primary Caregiver Child Interview (PCGCHILD2019)

The Primary Caregiver Child Interview is provided at the child level (N=4,615). The data file includes records for all children aged 0–17 years[3] for whom a primary caregiver provided a Primary Caregiver Child interview.

Note that the number of records is less than the total number of children included in CDS-2019 (N=4,629) because there are some children with other completed child-level interview components who do not have a corresponding PCGCHILD2019 interview (N=14).

Child Interview (CHILD2019)

The Child Interview is provided at the child level (one record per child interview, N=1,583). The file includes records for adolescents aged 12–17 years who completed the Child Interview questionnaire by telephone and for children age 8-11 years who completed an abbreviated version of the questionnaire in-person during an in-home visit (which were suspended due to the Covid-19 pandemic on 13 March 2020 and did not resume).

Note that there are fewer records on CHILD2019 than on PCGCHILD2019 because younger children were not eligible to complete their own Child interview and because some eligible children did not participate.

Child Assessment (ASSESS2019)

Data from the Woodcock-Johnson IV Tests of Achievement (WJ-IV) administered to CDS-2019 children are provided at the child level (one record per assessed child, N=1,524). The file includes item responses, raw and calculated scores for up to four tests, including Letter-Word, Passage Comprehension, Calculation, and Applied Problems, and calculated scores for Reading (combining scores from the Letter-Word and Passage Comprehension tests for children age 6 years and older) and Mathematics (combing scores from the Calculation and Applied Problems tests for children age 6 years and older). The file also includes child age and grade (used to establish a child's starting point in the assessment and to create age-standardized scores) and interviewer observations about testing conditions. Records are available for children age 3 years and older who participated in the in-home interview component (which was suspended due to the Covid-19 pandemic on 13 March 2020 and did not resume).

Time Diary

Questionnaire Administration File (TD_QN2019). The time diary questionnaire administration file is provided at the child level (one record per child with a completed time diary, N=1,541). The file describes time diary characteristics, including day, date, and mode of completion.

[3] A small number of children turned aged 18 years before they were interviewed; they remained eligible for the study based on their age when they were selected for the CDS-2019 sample.

Activity File (TD_ACT2019). The time diary activity file is provided at the activity spell level (one record per activity spell within each daily diary for each child, N=61,314). The data file is sorted by child, diary day (weekday/weekend day), and clock time, beginning at 12:00 am on the diary day). Within each diary day, the rows describe the sequence and characteristics of a child's primary and secondary activities over 24 hours, with time measured in seconds. The complete list of children's activities and their corresponding codes are included in the CDS-2019 Time Diary Coding Manual (available on the PSID website, www.psidonline.org, and the CDS website, www.cds-tas.org).

Aggregated Activity File (TD_AGG2019). The time diary aggregated activity file is provided at the child level (one record per child with a completed time diary, N=1,541). For each coded activity, the total time a child spent in that activity in a 24-hour day is provided for weekday and weekend reports separately.

Household Roster (HHROSTER2019)

The Household Roster File includes one record for each person residing in a CDS-2019 household at the time of the completed coverscreen interview (N=10,361). It includes three sets of unique identifiers for each person: a CDS-2019 family household identifier (R19CDHID) and roster position (R19INST); a PSID 2019 Core interview family unit identifier (R19YRID) and sequence number (R19CYPSN); and a time-invariant family lineage identifier (R19ID68) and person number (R19PN). These unique identifiers may be used to merge together individual-level content files within CDS-2019 or between CDS-2019 and other components of the PSID suite of studies, using the merging instructions provided below.

The HHROSTER2019 file also denotes with which primary caregiver each individual is affiliated if there are multiple primary caregivers in the household (R19PCGHH). Finally, it includes an indicator (R19TYPE) that describes each household member's role in CDS-2019.

There are several features of the household roster and the design of CDS-2019 that merit attention.

HHROSTER2019 includes individuals in households where at least one of the following study components was completed: the Primary Caregiver Household Interview, the Primary Caregiver Child Interview, or the Child Interview. Consequently, each household includes at least one primary caregiver or one eligible child for whom there is a record in at least one the qualifying study components. However, it is not the case that all study components are complete for all households.

As a result, users should expect that some fields will have missing values for some records when records from these interview components are merged. To help users account for this irregularity, the variable R19TYPE on the Household Roster describes each individual's record type in CDS-2019, including eligible participating child (1), participating primary caregiver (2), other family unit member (3), eligible non-participating child (4), or identified but non-participating primary caregiver (5).

Demographic Data (DEMOG2019)

The Demographic Data File is provided at the child level (one record per child, N=4,629). Records are included for all children who have a record on either the Primary Caregiver Child Interview (PCGCHILD2019), the Child Interview (CHILD2019), or both.

The Demographic Data File includes the following information:

- Children's unique identifiers in the 2019 PSID Core interview,
- For each study component, an indicator of whether a record for the child is included,
- Eligibility for and participation in CDS-2020 (see the CDS-2020 User Guide, available on the PSID website, www.psidonline.org, and the CDS website, www.cds-tas.org, for more information),
- Sampling weights,
- Primary caregiver relationship to child and child sequence number in Primary Caregiver Child interview,
- Child characteristics at birth reported by each known birth or adoptive parent, including birthweight, race (up to three mentions), and Hispanic ethnicity,
- Interviewer observations of PCG/child interaction during in-home visit, and
- For each rostered household member, their age, sex, and relationship to the child (unique identifiers for those household members appear on the Household Roster file).

Cumulative ID Map (CDSIND2019)

The purpose of the Cumulative ID Map is to provide unique identifiers for CDS children and their caregivers that allow users to merge data files within CDS, to merge in family and person- level information from other PSID study components including the Core (main) interview, and to map characteristics from one person to another (e.g., to attach caregivers' individual-level characteristics to their children's records).

The Cumulative ID Map File includes rows for all children selected to participate in CDS (regardless of whether they actually participated) and all designated primary or other caregivers since 1997 (N=19,644 as of CDS-2019). The file is in a wide format. Each selected CDS child or designated PCG or other caregiver (OCG, included in 1997, 2002, and 2007 only) occupies one row. A selected CDS child in one wave who becomes a designated primary caregiver to another CDS child in a later wave remains on the same row. Change in status from selected child to designated caregiver is indicated through the CDS record type variable described below.

The CDSIND2019 file includes the following sets of unique identifiers for each person:

- Time-invariant 1968 ID (CDSCUMID68) and person number (CDSCUMPN),
- Core (main) family interview ID (CRFID**) and sequence number (CRSN**) from the PSID Core interview wave immediately prior to a given wave of CDS, and
- CDS household ID (CDS_HID**) and sequence number (CDS_SN**) in a given CDS wave

The asterisks (**) stand in for a two-year suffix at the end of each variable name denoting survey year.

For CDS children, the same sets of identifiers are provided for primary caregivers:

- For all waves: ID68PCG**, PNPCG**, CRPCGFID**, and CRPCGSN**, and
- For CDS-2014 onward: CDSPCGSN** (Note that CDS_HID** is the same for caregivers and children).

Table 4.2 Unique Identifiers in CDS-2019
(Note: When Two variables are Listed in a Cell, the Variables are Jointly Unique)

		2019 PSID Core interview (Family ID, person ID)		CDS-2019 (Family ID, person ID)			Fixed (time-invariant) (Family ID, person ID)	
	Record unit (Ego)	Ego	Caregiver to Ego	Ego	Caregiver to Ego	Caregiver number	Ego	Caregiver to Ego
DEMOG2019	Child	X19YRID, X19CYPSN						
PCGCH2019	Child	P19YRID, P19CYPSN						
CHILD2019	Child	C19YRID, C19CYPSN						
ASSESS2019	Child	A19YRID, A19CYPSN						
TD_QN2019	Child	D19YRID, D19CYPSN						
TDAGG2019	Child	AGGID19, AGGSN19						
TDACT2019	Activity spell*	TDID19, TDSN19						
PCGHH2019	Primary caregiver	H19YRID, H19CYPSN		H19CDSHID, H19INST		H19PCGHH		
HHROSTER2019	Household member	R19YRID, R19CYPSN		R19CDSHID, R19INST	R19CDSHID, R19CDSHPIN	R19PCGHH	R19ID68, R19PN	
CDSIND2019	CDS sample (selected children and designated caregivers)	CRFID19, CRSN19	CRPCGFID19, CRPCGSN19	CDS_HID19, CDS_SN19	CDS_HID19, CDSPCGSN19	PCGHHNO19	CDSCUMID68, CDSCUMPN	ID68PCG19, PNPCG19

*File includes multiple activity spell records per child

For CDS children in the original CDS only (1997, 2002, and 2007), parallel identifiers are included for other caregivers:

- ID68OCG**, PNOCG**, CROCGFID**, CROCGSN**

Values on the caregiver identifier variables are set to "0" on caregivers' own records.

CDSIND2019 also includes an indicator of which type of record the individual contributed at each CDS wave (CDSTYPE**). CDS-2019 includes the following records types (CDSTYPE19):

0. Not a selected CDS child or designated primary caregiver in CDS-2019 (N=10,584)
1. Participating child (N=4,629)
2. Participating primary caregiver (N=2,616)
4. Non-participating selected child (N=1,806)
5. Non-participating designated primary caregiver (N=9)

The variable PCGHHNO19 indicates whether a CDS-2019 child's caregiver was the first or second designated primary caregiver residing in a household.

File Merging

Users may wish to combine information from multiple components of CDS-2019 into a single data file or to pull in information about children and their families from the PSID Core (main) interview, earlier waves of CDS, or other PSID studies. Below we describe the unique identifiers and steps required to conduct data merges. See Table 4.2 for a complete list of unique identifiers included in CDS-2019. See Table 4.3 for the expected number of matched records for selected file merges.

Table 4.3. Number of Matched Records between Merged Files (N=Appears on File 1 and File 2/N=Appears on File 1 only/N=Appears on File 2 only)

File 1 \ File 2	PCGHH2019*	PCGCH2019	CHILD2019
CHILD2019	1,577/6/1,496	1,569/14/3,046	–
PCGCH2019	4,614/1/21	–	1,569/3,046/14
DEMOG2019	4,622/7/18	4,615/14/0	1,583/2,646/0
ROSTER2019	10,313/0/48	–	–

*The first value in each cell describes the number of records on File 1 affiliated with a primary caregiver who appears on PCGHH2019. These records are matched using the CDS household identifier and primary caregiver number as shown in Table 4.2.

Merging CDS-2019 Data Files

Merging Child-Level Records

In the PSID Online Data Center (www.psidonline.org) and CDS Online Data Center (www.cds-tas.org), a user may include variables from multiple CDS-2019 child-level files in a data cart. The Data Centers will deliver a downloadable data file with all child-level records already merged across files.

Alternatively, a user may wish to use CDS-2019 packaged data, which includes separate data files for each study component. Each of these data files includes a pair of identifier variables that, in combination, uniquely identify each CDS child. The identifiers are drawn from the 2019

PSID Core interview and refer to the child's family interview identifier and sequence number (roster position in the family listing) from that interview. In each file, the family interview identifier includes the root YRID in the variable name and the variable name for the sequence number includes the root CYPSN. On each file, the prefix (three leading characters) is unique to the file and survey interview year. Refer to the column labeled 2019 PSID Core interview/Ego in Table 4.2 for a complete set of variable names.

To merge child-level records together across files, change variable names as needed so that they match between the two files. Then merge records together, being sure to use both the family interview ID and sequence number in order to uniquely identify children.

Merging Child and PCG Records

Users may combine variables from the CDS-2019 Primary Caregiver Household Interview file and variables from child-level files in a data cart in either the PSID Online Data Center or the CDS Online Data Center. In the CDS Online Data Center, a user may request to receive a data file on which primary caregiver and child records are already merged at either the child or primary caregiver level. This enhanced integration is only available in the CDS-TAS Online Data Center. In contrast, the PSID Online Data Center will generate child-level and Primary Caregiver Household Interview files separately with the CDSIND2019 map to link the two files.

To merge data between the Primary Caregiver Household Interview file and any child-level file, use the unique CDS household interview number and PCG household number, which children and their associated primary caregiver have in common. (In households with more than one primary caregiver, the PCG household number indicates whether the caregiver associated with a CDS child is the first or second primary caregiver in the household.)

Merging child and PCG records is most straightforward when using the CDS Cumulative ID Map (CDS2019IND) as a bridge between files. The Cumulative ID Map can be downloaded from the PSID packaged data page (https://simba.isr.umich.edu/Zips/ZipMain.aspx), and variables from the Cumulative ID Map can be added to data carts via the PSID Online Data Center (www.psidonline.org) and the CDS Online Data Center (www.cds-tas.org).

Use the following steps:

1. Conduct a one-to-one merge between the child-level file and CDSIND2019 using the two child ID variables (CRFID19 and CRSN19 in CDSIND2019; [z]YRID and [z]CYPSN in the child file where [z] is the three-character file-identifier prefix) as the unique identifiers. Prior to merging, rename the ID variables so that they will match as needed. This will merge the CDS household interview ID (CDS_HID19), the PCG household number (PCGHHNO19) and PCG PSID family identifiers (CRPCGFID19 and CRPCGSN19) to the child-level file.

2. Conduct a one-to-many merge between the Primary Caregiver Household Interview file (PCGHH2019) and CDSIND2019 using the CDS household interview number and PCG household number (CDS_HID19 and PCGHHNO19 in the CDS2019IND file and H19CDSHID and H19PCGHH in the PCGHH2019 file) as the unique identifiers; prior to merging, rename these variables as needed so that they match between the two files. This will put the Primary Caregiver Household Interview data and PCG identifiers at the child level.

3. Conduct a one-to-one merge using the child identifiers CRFID19 and CRSN19 to merge the files created in steps 1 and 2. Users may wish to remove records which are in either the Primary Caregiver Household Interview file or child-level data file but not in the other (e.g., PCGHH2019 records that do not have a corresponding child record or vice versa).

Merging CDS-2019 records to other PSID studies

Merging Individuals' Records

Users may merge a CDS-2019 content file directly to records from the PSID 2019 Core interview by using the Core 2019 family interview number and sequence number included on all CDS-2019 files ([z]YRID and [z[CYPSN, where [z] is the three-character file identifier prefix). The equivalent variables in the PSID cross-year individual-level file are ER34701 (family interview number, equivalent to [z]YRID in CDS-2019) and ER34702 (sequence number, equivalent to [z]CYPSN).

Users who wish to merge to records from other PSID Core interview waves or other PSID studies should use the time-invariant 1968 ID and person number instead. These variables are included on the Household Roster (HHROSTER2019, variables R19ID68 and R19PN) and the Cumulative ID Map (CDSIND2019, variables CDSCUMID68 and CDSCUMPN). The Household Roster includes records for all CDS-2019 household members. The Cumulative ID Map includes records for children who were selected for CDS-2019 and their designated primary caregivers.

Merging Child and Primary Caregiver Records

Users may wish to attach information about a primary caregiver that was collected in the PSID Core interview or elsewhere to a child's record. Use the time-invariant unique identifiers for the focal child (CDSCUMID68 and CDSCUMPN) and caregiver (ID68PCG19 and PNPCG19) on the Cumulative ID Map (CDSIND2019) for this purpose. The equivalent variables included on data extracts from the PSID Online Data Center or CDS Online Data Center are ER30001 (1968 family interview ID) and ER30002 (person number).

Merge the Cumulative ID Map to any other content file using the *primary caregiver's* unique identifiers. (First rename the unique identifiers for the primary caregiver as needed in order to facilitate a merge between the two files.) This will attach the primary caregiver's characteristics from the external file to the child's record on the Cumulative ID Map.

Use a one-to-many merge approach because the same caregiver may appear on multiple children's records in the Cumulative ID Map file but will only appear once on their own record in data files associated with the PSID Core interview.

Note that only a subset of records will be matched. Some records will appear only on the Cumulative ID Map. This includes records for children who were not CDS-2019 participants; primary caregivers themselves; and children who were in CDS-2019 but whose primary caregiver has no record on the content file. Other records will appear only on the content file. This includes all individuals who were not the primary caregiver to a child in CDS-2019. Users may wish to remove these unmatched records.

An alternative to this approach is to request a data extract from the CDS Online Data Center (https://www.cds-tas.org). In the data cart, include at least one child-level variable from CDS-2019. In addition, select individual-level characteristics from the Curated PSID Variables that

are of interest with regard to a child's primary caregiver such as age or years of educational attainment. At checkout, check the box for "Child to Primary Caregiver Integration." This will add unique identifiers for the primary caregiver as well as the primary caregiver's values on all of the variables included in the cart. These variable names will include suffixes that refer to the primary caregiver.

5. THE CDS-2019 WEIGHTS

CDS-2019 includes cross-sectional and longitudinal weights. This chapter describes the construction and use of these weights. We recommend that researchers use an appropriate CDS-2019 weight with all of their analyses.

Cross-Sectional Weights

CDS-2019 cross-sectional child weights allow researchers to generalize their statistical results to the age-appropriate US national population of children in 2019. The CDS-2019 cross-sectional PCG weights similarly allow researchers to generalize their results to the 2019 US national population of children's caregivers.

There are four cross-sectional child weights and one cross-sectional PCG weight for CDS-2019. The CDS-2019 cross-sectional weights are:

1. Child Cross-Sectional Weight (X19CHWGT)
2. Child In-Home Weight (X19IHWGT),
3. Child Interview Weight (X19CHIWWGT),
4. Child Time Diary Weight (X19TDWGT), and
5. PCG Weight (H19PCGWGT).

The Child Cross-Sectional Weight includes a base component derived from the 2019 Core PSID weight that accounts for differential sample selection probabilities in the PSID sample design and attrition in Core PSID. The Child Cross-Sectional Weight incorporates differential patterns of non-response and corrects potential under-coverage of certain demographic subgroups using post-stratification. The PCG weight was directly derived from the Child Cross-Sectional Weight. The Child In-Home Weight and the Child Time Diary Weight were derived from the Child Cross-Sectional Weight and account for differential non-response for the corresponding survey modules. The Child Interview Weight is available for the subset of children aged 8–17 years who completed a Child Interview and is based on the Child In-Home Weight for children aged 8–11 years and the Child Cross-Sectional Weight for children aged 12–17 years.

The Child Cross-Sectional Weight was constructed for each child with one or both of the following two modules: (1) the Primary Caregiver (PCG) Child Interview and (2) the Child Interview. All children in CDS-2019 were eligible for a PCG-Child Interview. A Child Interview was only administered to children aged 8–17 years.[4] All children aged 8–17 years were asked to complete a Child Interview, but children aged 8–11 years could only complete the Child Interview during a home visit.

The Child In-Home Weight was constructed for each child who completed one or both of the following modules: (1) Woodcock-Johnson IV Assessments and (2) Child Interview for children aged 8–11 years. The Child Time Diary Weight was constructed for each child who completed a time diary as part of CDS-2019. These time diaries were completed prior to the Covid-19 pandemic ending the CDS-2019 home visits on 14 March 2020. No official weight is provided for any time diaries completed as part of CDS-2020 in the Fall of 2020, and we recommend against pooling the two sets of time diaries from CDS-2019 and CDS-2020 because of the different circumstances and time use patterns across these two separate periods due to the effects of the

[4] A small number of children reached age 18 years before they were interviewed; they remained eligible for the study based on their age when they were selected for the CDS-2019 sample.

Covid-19 pandemic during the CDS-2020 field period. See the CDS-2020 User Guide for more information about the time diaries collected in the Fall of 2020 and for a link to an available unofficial weight to use with the CDS-2020 time diaries.

The Child Cross-Sectional Weight is the variable **X19CHWGT**, which has one value for each of the 4,629 children who completed an interview. The Child In-Home Weight (**X19IHWGT**) is provided for 1,266 children for analyzing Woodcock-Johnson Assessments. The Child Interview Weight (**X19CHIWWGT**) has one value for each of the 1,583 children aged 8–17 years who completed a child interview in CDS-2019. The Child Time Diary Weight (**X19TDWGT**) has one value for 1,541 children for analyzing the time diary data collected in CDS-2019. These four child weights are designed to be used for cross-sectional analyses with the child as the unit of observation, so they should be used with child-level data in CDS-2019. The PCG Weight (**H19PCGWGT**) has one value for 2,616 PCGs in the sample, including 18 PCGs who completed the PCG Household Interview but for whom no corresponding child-level data are available.

The Child Cross-Sectional Weight was designed to be used for all analyses based on the PCG-Child Interview because this interview component includes one observation for each child in the sample. This weight should not be used for analyses of data from the in-home components or from the time diaries, because these components have observations only for a subset of the CDS-2019 sample. The Child Cross-Sectional Weight can be used with Child Interview data for children aged 12–17 years. These same weight values for children aged 12–17 years are included in the Child Interview Weight, along with the appropriate weights for children aged 8–11 years (from the Child In-Home Weight). For analyses of Child Interview data for children across the full age range of 8–17 years, we recommend using the Child Interview Weight.

Table 5.1 Use of CDS-2019 Weights for Analyzing Interview Data

Analysis sample	Recommended weight	Cases
PCG-Child interview data for all children	X19CHWGT	4,629
Child Interview data for children aged 8–17 years	X19CHIWWGT	1,583
Woodcock-Johnson IV Assessments for children	X19IHWGT	1,254
Child Time Diary	X19TDWGT	1,541
PCG-Household interview data	H19PCGWGT	2,616

Note: Child age eligibility is based on is variable C19CHAGE. Some children completed their Child Interview shortly after turning age 18 years.

Overview of Method to Construct Cross-Sectional Child Weights

We first constructed the Child Cross-Sectional Weight. The Child In-Home Weight and the Child Time Diary Weight were derived from the Child Cross-Sectional Weight and then adjusted for differential attrition for each module. The Child Interview Weight uses the Child Cross-Sectional Weight and the Child In-Home Weight. The basic steps to producing these weights were as follows:

1. Account for all probabilities of selection for eligible families and children through to the initial determination of eligibility for CDS-2019.
2. Adjust for CDS-2019 non-response.
3. Set aside the small number of CDS-2019 cases residing outside the US, for which their Child Cross-Sectional Weight is now final.
4. Trim very large and very small values of the attrition-adjusted weights.

5. Post-stratify the trimmed attrition-adjusted sample selection weights to the 2019 American Community Survey population totals based on year of birth, sex, race, Census region, and non-group quarters status. This produces the final Child Cross-Sectional Weight for cases currently residing in the US.
6. Pool the US cases and non-US cases, which both now have their final Child Cross-Sectional Weight.
7. Adjust the final Child Cross-Sectional Weight to produce the Child In-Home Weight.
8. Produce the Child Interview Weight for Children Aged 8–17 Years from the Child In-Home Weight (for children aged 8–11 years) and the Child Cross-Sectional Weight (for children aged 12–17 years).
9. Adjust the final Child Cross-Sectional Weight to produce the Child Time Diary Weight.

Table 5.2 summarizes the CDS-2019 sample based on key features that shape the construction of the weights.

Table 5.2 Summary of CDS-2019 Child Cases for Weights

Description	Total cases	US cases	Non-US cases
Eligible for CDS-2019	6,435	6,396	39
Completed CDS-2019 by component			
PCG-Child or Child Interview	4,629	4,592	37
Child Interview	1,583	1,581	2
Woodcock-Johnson assessment or Child Interview (age 8–11 years)	1,266	1,266	0
Time Diary Module in 2019	1,541	1,541	0

Method to Construct Cross-Sectional Child Weights

We next describe the steps of the process for constructing the CDS-2019 weights.

Step 1. Selection Probabilities for CDS-2019

For all eligible CDS-2019 children (N=6,435), a base probability of selection weight was established using the Longitudinal Individual Weight from the 2019 Core PSID.

Step 2. Non-Response Adjustment

A non-response adjustment factor for the weight was obtained from a logistic regression model of the response outcome. All eligible CDS-2019 child cases were included in the model. Data from the 2019 Core PSID were used for covariates in the model predicting a response indicator, *y*, with *y*=0 if the case was non-response and *y*=1 if the case completed a PCG-Child Interview or a Child Interview. The estimated coefficients and standard errors for the logistic regression model are reported in Appendix Table A.1.

Research by Little and Vartivarian[5] recommends adjusting for design variables in non-response weights by, first, modeling non-response as a function of the adjustment cell and design variables, and, second, by estimating the response weight as the inverse of the estimated response probability from this model. Each child's longitudinal weight from the 2019 Core PSID incorporates unequal probability of selection in the sample design and was added to the CDS-

[5] Little, R.J. and Vartivarian, S. (2003). On weighting the rates in non-response weights. *Statistics in Medicine*, 22, 1589–1599.

2019 response propensity model to adjust for design variables as part of the CDS-2019 non-response weighting.

The logistic regression model results indicate the probability of response in CDS-2019 was higher among children who are younger, Hispanic and African American, in households where the reference person has higher education, in households with fewer children, in households in the metro area of the West region, and in households outside the US; the probability of response was lower among 2017/2019 new immigrants. A number of variables in the response propensity model are not statistically significant predictors of CDS-2019 response (e.g., family income, child sex, age of household reference person, census region, and metro area); however, these non-significant variables were retained in the model used to derive estimates of the propensity of response. Overall, the Hosmer-Lemeshow test of goodness of fit test (χ^2=6.27, 8 df, p=0.62) suggests that the response model provides an acceptable fit.

Based on the estimated logistic regression model, predicted probabilities of response were computed for each CDS-2019 sample case and grouped into deciles. These decile groups served as the classes within which a uniform non-response weighting adjustment was applied.[6] Each respondent case was assigned a non-response adjustment factor equal to the inverse of the median predicted probability of completing a CDS-2019 interview within its decile weighting class. The median response propensity and adjustment factor for each decile of the predicted probability response in CDS-2019 are shown in Table 5.3.

Table 5.3. CDS-2019 Median Response Propensity and Weighting Adjustment Factor for Child Cross-Sectional Weight

Response propensity decile	Median response propensity	Adjustment factor
1	0.579	1.726
2	0.639	1.565
3	0.679	1.472
4	0.704	1.421
5	0.723	1.384
6	0.739	1.353
7	0.755	1.325
8	0.771	1.298
9	0.790	1.265
10	0.823	1.215

The probability of selection weight for each CDS-2019 observation was then multiplied by the non-response adjustment factor to produce an interim weight that adjusts for probability of selection and CDS-2019 non-response.

Step 3. Non-US Cases

There were 39 eligible cases in CDS-2019 that resided outside the US during the fieldwork period. Although interviews were attempted for all of these cases and completed among some of them, these cases are not included in the post-stratification adjustment because the control total for this adjustment are based on the US resident population. At this step, for the non-US CDS-2019 cases, the Child Cross-Sectional Weight is complete.

[6] Little, R.J. and Rubin, D.B. (2002) *Statistical Analysis with Missing Data*, 2nd Edition. New York: John Wiley & Sons.

Step 4. Trimming of Weights

The distribution of the interim, attrition-adjusted weights was examined and a decision was made to trim extreme values at both ends of the distribution. The reason for trimming the weights was to reduce the influence of extreme weight values on the variances of weighted sample estimates. Weight trimming also provides some protection against arbitrary combinations of extreme weights and large or unique values of substantive variables that could exert high leverage on multivariate analyses such as regression modeling. The trimming rule, applied to the attrition-adjusted child weight from Step 2, assigned all cases with weights in the top one percent and in the bottom one percent of the distribution to, respectively, values at the 99th and 1st percentiles.

Step 5. Post-Stratification to Population Control Totals

We next post-stratified the trimmed, attrition-adjusted weights from Step 4 to population control totals from the 2019 American Community Survey (ACS). Post-stratification cells were formed based on the following respondent characteristics:

- Child sex (male/female)
- Birth year of child (2002–2018)
- Child race/ethnicity (Hispanic, non-Hispanic Black, non-Hispanic White, or other)
- Census region (Northeast, Midwest, South, West)

Post-stratification cells defined by the full four-way cross-classification of these categorical variables were collapsed as needed to ensure a minimum count of approximately 15–20 cases in each cell. The post-stratification adjustment factors were computed as the ratio of the ACS control totals to the CDS-2019 weighted population estimate (using the interim weight from Step 4). Appendix Table A.2 shows the CDS sample count, CDS weighted estimates, the ACS population estimates, and the post-stratification adjustment factors for each of the 100 cells defined by birth year, sex, race/ethnicity, and region.

The post-stratification adjustment factors were applied to the interim weight to produce a post-stratified weight.

Step 6. Combining the US and Non-US Cases

The final step in creating the Child Cross-Sectional Weight was to combine the weights from Step 3 for non-US cases with the weights from Step 5 for cases in the US.

Step 7. Produce the Child In-Home Weight

The construction of the Child In-Home Weight is based on the Child Cross-Sectional Weight, but also incorporates an adjustment for differential response to the in-home modules and post-stratification based on the population control totals. Before creating the Child In-Home Weight, we verified that there was adequate representation of sample children who had completed in-home components across all demographic subgroups in the sample in order for the weights to provide appropriate inference to the national population.

The administration of in-home components was prematurely ended in mid-March 2020 because of the Covid-19 pandemic. The likelihood of receiving a home visit was related to the proximity of each family to an interviewer. Families residing within an interviewer's local area (defined as

within a 75-mile radius) were more likely to receive a home visit before the visits ended. Some families who lived outside the local area of any interviewer also received a home visit by a travelling interviewer, but the interviewer trips had only recently begun when the home visits ended. The interviewer trips were sequenced in part based on the number of families residing in proximity to each other, with a likelihood of an interviewer visit higher for larger travel clusters. We classified families into three groups based on how many other families were in the same travel area: small (fewer than 8 families), medium (8–24 families), and large (25+ families).

Step 7.1. Non-Response Adjustment

A non-response adjustment factor for the weight was obtained from a logistic regression model of the response outcome. The model included all children aged 3–17 years who had a completed PCG-Child Interview and were living in the US.

It is possible to reduce non-response bias without increasing sampling variance of the survey estimates by including in the non-response model covariates that are correlated with both the survey response and the study's substantive measures.[7] For this reason, the following substantive measures from the PCG-Child Interview or PCG-Household Interview were incorporated in the non-response model for the Child In-Home Weight:

- Child Behavioral Problems Index (a scale, ranging from 0–27),
- Safety of the local neighborhood (four-category response),
- Child health status (five-category assessment),
- Household food security status (four-category variable, based on a scale), and
- PCG K-6 psychological distress (scale, ranging from 0–24).

Because participation in the home visits generally required prior completion of the PCG-Child Interview, these variables are available for both respondents and non-respondents. Additional model covariates were obtained from the 2019 Core PSID and from coding the proximity of the interviewer and the travel cluster size. The logistic regression model predicted a response indicator, y, with y=0 if the case was non-response and y=1 if the case completed the in-home child assessment or in-home child interview for children aged 8–11 years. The estimated coefficients and standard errors are reported in Appendix Table A.3.

The results indicate that the probability of response in CDS-2019 was higher among children born in 2008 to 2012 (compared to children born earlier or later), in households in the West region, in households with lower family income, in households located within 75 miles of an interviewer, in households with very low food security, and among children with the highest levels of behavior problems. The probability of response was lower among families in the 1997/1999 PSID new immigrant refresher sample, in households with a male reference person, in household where the reference person had fewer years of education, in households in metro areas, in households in non-metro areas of the Northeast region, in households where the primary caregiver described the neighborhood as somewhat unsafe, and among children with no behavior problems. Although a number of variables were not statistically significant, these variables were all retained. Overall, the Hosmer-Lemeshow test of goodness of fit test (χ^2=1.93, 8 df, p=0.98) suggests that the response model provides an acceptable fit.

[7] Little, R.J., & Vartivarian, S. (2005). Does weighting for nonresponse increase the variance of survey means? *Survey Methodology*, *31*(2), 161.

Based on the estimated logistic regression model, predicted probabilities of response were computed for each observation and grouped into deciles. These decile groups served as the classes within which a uniform non-response weighting adjustment was applied. Each respondent case was assigned a non-response adjustment factor equal to the inverse of the median predicted probability of successful completion of the in-home components within its decile weighting class. The median response propensity and adjustment factor for each decile of the predicted probability response are shown in Table 5.4.

Table 5.4. CDS-2019 Median Response Propensity and Weighting Adjustment Factor for Child In-Home Weight

Response propensity decile	Median response propensity	Adjustment factor
1	0.104	9.616
2	0.168	5.956
3	0.222	4.514
4	0.261	3.835
5	0.298	3.352
6	0.330	3.028
7	0.365	2.738
8	0.401	2.496
9	0.446	2.242
10	0.522	1.915

The probability of selection weight for each in-home module respondent was then multiplied by the non-response adjustment factor to produce an interim weight that adjusts for non-response of the in-home components.

Step 7.2. Trimming of Weights

The distribution of the interim, attrition-adjusted weight was examined and a decision made to trim extreme values at both ends of the distribution. The trimming rule, applied to the attrition-adjusted Child In-Home Weight from Step 7.1, assigned all cases with weights in the top two percent and in the bottom two percent of the distribution to, respectively, the 98th and 2nd percentiles.

Step 7.3. Post-Stratification

We next post-stratified the trimmed, attrition-adjusted weights from Step 7.2 to population control totals from the 2019 American Community Survey (ACS). Eligibility for the in-home components is age 3–17 years, hence the target population for the in-home components is the national population of children born from 2002 to 2016, living in the US, and not living in institutional group quarters.

Post-stratification cells were formed based on the following respondent characteristics:

- Child sex (male/female)
- Birth year of child (2002–2016)
- Child race/ethnicity (Hispanic, non-Hispanic Black, non-Hispanic White, or other)
- Census region (Northeast, Midwest, South, West)

Post-stratification cells defined by the full four-way cross-classification of these categorical variables were collapsed as needed to ensure a minimum count of approximately 10–15 individuals in each cell, except for some cells for birth year 2002 that were retained in order to keep CDS-2019 estimated proportions of children in that birth year close to the population estimates. The post-stratification adjustment factors were computed as the ratio of the ACS control totals to the CDS-2019 weighted population estimates (using the interim weight from Step 7.2). Appendix Table A.4 shows the CDS sample counts, CDS weighted estimates, the ACS population estimates, and the post-stratification adjustment factors for each of the 60 cells defined by birth year, sex, race/ethnicity, and region.

The post-stratification adjustment factors were then applied to the interim weight to produce a post-stratified weight. The post-stratified weight is the final Child In-Home Weight.

Step 8. Produce the Child Interview Weight

The Child Interview Weight for children aged 8–17 years (X19CHIWWGT) was created directly from the Child In-Home Weight (X19IHWGT) for children aged 8–11 years and from the Child Cross-Sectional Weight (X19CHWGT) for children age 12–17 years. No further adjustments were made to create the Child Interview Weight other than combining these two separate weights into a single weight variable. This single Child Interview Weight can be used for all children aged 8–17 years or for any subset of child interview data based on child age—for example, children aged 8–11 years or children aged 12–17 years.

Step 9. Produce the Child Time Diary Weight

Children who completed the PCG-Child Interview were eligible to complete time diaries. The construction of the Child Time Diary Weight is based on the Child Cross-Sectional Weight, incorporates differential non-response in completing the time diaries, and is post-stratified to the population control totals. No children residing outside the US completed a time diary as part of CDS-2019, so the inference made from this sample only cover children residing in the US.

Step 9.1. Non-Response Adjustment

A non-response adjustment factor for the weight was obtained from a logistic regression model of the response outcome. All children who had a PCG-Child Interview residing in the US were included in the model.

The non-response model for the Child Time Diary Weight used logistic regression to predict a response indicator, y, with y=0 if the case was non-response and y=1 if the case completed a CDS-2019 time diary. Model covariates included variables from 2019 Core PSID, indicators of the proximity of an interviewer and the travel cluster size, and the following substantive measures from the CDS-2019 PCG-Child Interview and PCG-HH Interview:

- Child Behavioral Problems Index (a scale, ranging from 0–27), and
- Household food security status (four-category variable, based on a scale).

The results of an ANOVA analysis indicated that time diary completion did not have a statistically significant association the PCG psychological distress scale, PCG's perceived safety of the local neighborhood, or child health status. These covariates were therefore excluded from the time diary response propensity model. The estimated coefficients and standard errors for the logistic regression model are reported in Appendix Table A.5.

The logistic regression model results indicate that the probability of time diary completion was higher among children in the middle of the childhood age range, in households with lower family income, in households in non-metro areas in the West region, among children with higher levels of behavior problems, and in households with marginal or very low food security. The probability of response was lower among children in either of the two new immigrant samples, in households in which the reference person had fewer years of education, in households in non-metro areas in the Northeast region, and in households in the travel clusters. Although a number of variables in the response propensity model are not statistically significant predictors of time diary response, they were all retained in the model used to derive estimates of the propensity of response. Overall, the Hosmer-Lemeshow test of goodness of fit test (χ^2=8.94, 8 df, p=0.35) suggests that the response model provides an acceptable fit.

Based on the estimated logistic regression model, predicted probabilities of response were computed for each observation and grouped into deciles. These decile groups served as the classes within which a uniform non-response weighting adjustment was applied. Each respondent case was assigned a non-response adjustment factor equal to the inverse of the median predicted probability of successful completion of the 2019 time diary module within its decile weighting class. The median response propensity and adjustment factor for each decile of the predicted probability response are shown in Table 5.5.

Table 5.5. CDS-2019 Median Response Propensity and Weighting Adjustment Factor for Child Time Diary Weight

Response propensity decile	Median response propensity	Adjustment factor
1	0.172	5.805
2	0.227	4.399
3	0.262	3.818
4	0.291	3.438
5	0.317	3.152
6	0.346	2.891
7	0.374	2.677
8	0.406	2.463
9	0.445	2.249
10	0.508	1.970

The probability of selection weight for each time diary respondent was then multiplied by the non-response adjustment factor to produce an interim weight that adjusts for the non-response to the time diary.

Step 9.2. Trimming of Weights

The distribution of the interim, attrition-adjusted weights was examined and a decision was made to trim extreme values at both ends of the distribution. The trimming rule, applied to the attrition-adjusted Child Time Diary Weight from Step 9.1, assigned the cases with the weight values in the top two percent and in the bottom two percent of the weight distribution to, respectively, the 98th and 2nd percentiles.

Step 9.3. Post-Stratification

We next post-stratified the trimmed, attrition-adjusted weights from Step 9.2 to population control totals calculated from the 2019 American Community Survey (ACS). The target

population for the 2019 time diary module is the national population of children born from 2002 to 2018, living in the US, and not living in institutional group quarters.

Post-stratification cells were formed based on the following respondent characteristics:

- Child sex (male/female)
- Birth year of child (2002–2018)
- Child race/ethnicity (Hispanic, non-Hispanic Black, non-Hispanic White, or other)
- Census region (Northeast, Midwest, South, West)

Post-stratification cells defined by the full four-way cross-classification of these categorical variables were collapsed as needed to ensure a minimum count of approximately 10–15 individuals in each cell, except for some cells for birth year 2002 that were retained in order to keep the estimated proportion of children in that birth year close to the population estimates. The post-stratification adjustment factors were computed as the ratio of the ACS control totals to the CDS-2019 weighted population estimate count (using the interim weight from Step 9.2). Appendix Table A.6 shows the CDS-2019 sample count, CDS-2019 weighted estimates, the ACS population estimates, and the post-stratification adjustment factors for each of the 69 cells defined by birth year, sex, race/ethnicity, and region.

The post-stratification adjustment factors were then applied to the interim weight to produce the final Child Time Diary Weight.

Method to Construct the PCG Weight

The PCG Weight was derived entirely from the Child Cross-Sectional Weight. In particular, PCGs were assigned the average weight over all children for whom they were the responsible primary caregiver. For PCGs with no corresponding children in the sample (because no child interview components were completed and hence no child weight was constructed), a PCG weight was imputed. The imputed PCG weight was based on imputed values for the missing child weights.

Child Longitudinal Weight

The CDS-2019 child sample includes children who participated in CDS-2014. These sample children were all born between 2002 and 2013, and hence were aged 1–12 years in CDS-2014 and aged 6–17 years in CDS-2019. To support longitudinal analysis of CDS children who participated in both the 2014 and 2019 CDS waves, we provide a longitudinal child weight. This weight accounts for differential probabilities of selection due to the original PSID sample design and subsequent attrition.

The CDS-2019 Child Longitudinal Weight (X19LONGWGT) is provided for 2,338 children and is designed for analyses of outcomes for children who participated in both CDS-2014 and CDS-2019. The construction of this CDS longitudinal weight is described in this section.

<u>Sample Transition from CDS-2014 to CDS-2019</u>

Of the 4,333 children who participated in CDS-2014, a total of 3,258 were projected to be age-eligible for CDS-2019. Table 5.6 summarizes the CDS-2019 fieldwork outcomes for these 3,258 children. In CDS-2019, data were collected on a total of 2,338 of these age-eligible children, representing an unweighted response rate of (2,338 / (3,280 – 7) =) 71.4%. The projected

eligible sample excludes a total of 7 children who died (n=1), were reclassified as non-sample (n=3), or were institutionalized (n=3). Children were classified as non-response (n=935) either because their family ended participation in PSID prior to the start of CDS-2019 (n=273) or because they did not participate in CDS-2019 for any reason (n=662).

Table 5.6. CDS-2019 Fieldwork Outcomes for Age-Eligible Children from CDS-2014

CDS-2019 outcome	Count
Child data collected in CDS-2019	2,338
Non-response of family for Core PSID by or in 2019	273
Non-response for child in CDS-2019	662
Total non-response = 935	
Child reclassified as non-sample	3
Child deceased	1
Child institutionalized	3
Total non-sample = 7	
Total	3,280

Approach

Survey weights are typically designed to account for unequal probabilities of selection and for sampled individuals missing at random due to non-response.[8] These weights are inversely proportional to the probability that each observation is selected for the survey and, conditional on selection, that each individual participates. With longitudinal data, this joint probability at time *t*, where the study has started at *t–1* or earlier, can be expressed as follows:

$$P(S_t=1) = P(S_{t-1}=1) \times P(R_t=1|S_{t-1}=1), \quad (1)$$

where S_t is an indicator of participation in the study at time *t* and R_t is an indicator of response at time *t.* Under this quasi-random model of the survey response process, the probability of being a participant at time *t* is the product of the probability of participating in the previous period and the conditional probability of responding in the current period. Because the first term on the right-hand side of Equation 1 is proportional to the reciprocal of the weight in the previous period, the weight in the current period is a product of the weight in the previous period and the inverse of the probability of response (the second term on the right hand side of Equation 1). We will refer to $1 / P(R_t=1|S_{t-1}=1)$ as the attrition adjustment factor.

If a covariate is correlated with both the survey response and the study outcomes, it can reduce non-response bias without increasing sampling variance of the survey estimates.[9] The correlation with key outcomes in CDS will be considered for selecting the covariates used in the response propensity model.

To reduce variation in response propensity weights and lower the reliance on correct model specification of the logistic regression, attrition adjustment classes are created by grouping the probability of response (propensity score stratification; see Footnote 8). Then the inverse of the

[8] Little, R.J. and Rubin, D.B. (2002) Statistical Analysis with Missing Data, 2nd Edition. New York: John Wiley & Sons.

[9] Little, R. J., & Vartivarian, S. (2005). Does weighting for nonresponse increase the variance of survey means? *Survey Methodology*, *31*(2), 161.

median predicted probability of response of each adjustment class is used as the attrition adjustment factor for that class.

Construction of CDS-2019 Child Longitudinal Weight

The CDS-2019 Child Longitudinal Weight is the product of the CDS-2014 Child Weight (X14CHWGT) and an attrition adjustment factor that accounts for differential non-response between CDS-2014 and CDS-2019.

To obtain the attrition adjustment classes, we estimated a logistic regression model to obtain the predicted probability that a sample child was response case in CDS-2019. The dependent variable for this response propensity model is y=1 if the sample child was response in 2019 and y=0 if they were non-response.

For covariates in the logistic regression model, we selected the following 25 key outcome variables that were collected in both CDS-2014 and CDS-2019 and assumed that the variable collected in 2014 was correlated with the same variable collected in 2019:

For covariates in the logistic regression model, we only had variables from CDS-2014 available for both respondents and non-respondents. We assumed that variables from CDS-2014 were correlated with the corresponding variable from CDS-2019 and selected the following 25 key outcomes from CDS-2014 as covariates:

- Child health status (five-category assessment),
- Child birthweight,
- Child had frequent ear infections,
- Child had speech impairment,
- Child had development delay,
- Child had allergies,
- Child was obese,
- Child had limits on participation in athletic activities,
- Child's frequency of wheezing attacks,
- Child visited a doctor for illness or injury,
- Child's immunizations were up to date,
- Child's time since last well-child doctor visit,
- Child regularly eats breakfast,
- Child uses a computer at home,
- Child uses a phone or tablet computer at home,
- PCG K-6 psychological distress (scale, ranging from 0–24),
- PCG's internet skills score (scale),
- PCG's Rosenberg self-esteem score (scale),
- PCG's aggravation in parenting score (scale),
- Household's number of books owned,
- Family attends religious services,
- Family importance of religion,
- Family's time lived in neighborhood,
- PCG's rating of neighborhood, and
- Household food security status (four-category variable, based on a scale).

The full set of covariates in the logistic regression models included these outcomes from CDS-2014 along with a set of background demographic and socioeconomic variables from the 2013 Core PSID. The CDS-2014 Child Weight was also included as a covariate, to serve as proxy of the sample design variables. The estimated parameters and standard errors for the logistic regression model are reported in Appendix Table A.7. Although a number of covariates were not statistically significant, they were nevertheless retained in the model. Overall, the Hosmer-Lemeshow test of goodness of fit test (χ^2=11.82, 8 df, p=0.16) suggests that the response model provides an acceptable fit.

Predicted response propensities were computed from the estimated logistic regression model and grouped into deciles. These decile groups served as the classes within which a uniform attrition weighting adjustment was calculated. Each CDS-2019 longitudinal response case was assigned an attrition adjustment factor equal to the inverse of the median response propensity within its decile weighting class. The median response propensity and adjustment factor for each decile are shown in Table 5.7.

Table 5.7. CDS-2019 Median Response Propensity and Weighting Adjustment Factor for the Child Longitudinal Weight

Response propensity decile	Median response propensity	Adjustment factor
1	0.156	6.413
2	0.202	4.940
3	0.233	4.296
4	0.257	3.892
5	0.280	3.574
6	0.303	3.302
7	0.328	3.048
8	0.357	2.798
9	0.395	2.535
10	0.454	2.202

The final Child Longitudinal Weight for CDS-2019 was constructed as the product of their CDS-2014 Child Weight and their weighting class attrition adjustment factor.

To examine the properties of the CDS-2019 Child Longitudinal Weight, we compared weighted estimates for selected demographic, geographic, and socioeconomic variables in the CDS-2014 data using two approaches. The first was based on the CDS-2014 sub-sample that remained eligible for CDS-2019 and used the CDS-2014 Child Weight. The second approach was based on CDS-2019 panel response cases and used the CDS-2019 Child Longitudinal Weight. The results are presented in Table 5.8, and show that the distributions of the selected characteristics are similar across the two approaches. This suggests that the attrition adjustment for the CDS-2019 Longitudinal Child Weight compensates for potential attrition bias—at least for the variables included in this comparison. Note, however, that this comparison does not necessarily rule out the possibility of selection bias associated with other characteristics of the respondents.

Table 5.8. Comparison of Estimates Using: (1) the Full CDS-2014 Sample and the CDS-2014 Child Weight and (2) CDS-2014 Data for CDS-2019 Participants and their CDS-2019 Child Longitudinal Weight

Characteristic from CDS-2014 or 2013 PSID*	Value	Estimate using CDS-2014 data and CDS-2014 Child Weight		Estimate using CDS-2014 data for CDS-2019 participants and their CDS-2019 Child Longitudinal Weight		Ratio (2)/(4)
		Column 1 (N)	Column 2 (percent)	Column 3 (N)	Column 4 (percent)	Column 2/4
Region	Northeast	323	13.58	241	13.48	1.01
	North Central	860	24.45	613	24.43	1.00
	South	1,448	38.14	1,020	38.67	0.99
	West	627	23.30	454	22.96	1.01
	Outside of US	15	0.53	10	0.46	1.16
Immigrant sample	Non-immigrant	2,986	83.35	2,125	82.85	1.01
	Immigrant	287	16.65	213	17.15	0.97
Metropolitan Statistical Area	MSA	2,505	76.04	1,816	76.46	0.99
	Non-MSA	753	23.43	512	23.08	1.02
	Outside of US	15	0.53	10	0.46	1.16
Child birth year	2002-2005	1,087	36.70	792	37.08	0.99
	2006-2009	1,183	35.99	841	35.72	1.01
	2010-2013	1,003	27.31	705	27.20	1.00
Child sex	Female	1,677	48.53	1,210	48.77	1.00
	Male	1,596	51.47	1,128	51.23	1.00
Race/ethnicity of child	Hispanic	442	24.94	335	25.01	1.00
	Non-Hispanic Black	1,329	15.98	984	16.23	0.98
	Non-Hispanic White	1,421	55.68	971	55.11	1.01
	Non-Hispanic Other	81	3.41	48	3.64	0.93
Education of reference person (RP)	Education unknown	40	1.16	24	1.09	1.06
	No high school diploma	601	16.66	433	18.02	0.92
	High school diploma only	888	25.35	630	25.29	1.00
	Some college	901	25.50	640	25.56	1.00
	College or more	843	31.33	611	30.04	1.04
Age of RP	30 or younger	1,093	25.24	756	25.43	0.99
	31–45	1,828	59.48	1,322	59.15	1.01
	46 or older	352	15.28	260	15.42	0.99
Sex of RP	Female	1,005	19.48	730	19.40	1.00
	Male	2,268	80.52	1,608	80.60	1.00
Employment of RP	Unemployed	328	8.54	251	8.09	1.06
	Employed	2,945	91.46	2,087	91.91	1.00
Number of children in family	1	684	19.61	508	18.82	1.04
	2	1,209	38.50	877	39.18	0.98
	3	829	26.06	599	27.21	0.96
	4+	551	15.83	354	14.79	1.07
Total		3,273	100.00	2,338	100.00	1.00

Note: *characteristics of the reference person (RP) and household/family were collected in the 2013 Core PSID interview.

Summary of Weights

In Table 5.9 we list all of the CDS-2019 child weights and the PCG weight and present case counts and summary statistics. The estimated US population of children born from 2002 to 2018 and not living in institutional group quarters is 69,281,033. The Child Time Diary Weight sums to the same national population of children. The sum of the Child Cross-Sectional Weight is slightly higher because of the inclusion of the respondents residing outside the US. The Child In-Home Weight sums to the national population of children aged 3–17 years, and hence its weight sum is lower than the sum totals of the other two cross-sectional child weights. The sum of the Child

Interview Weight is lower because it only represent the population of children aged 8–17 years. The mean of the Child Time Diary Weight reflects the response rate for this component when compared to the mean of the Child Cross-Sectional Weight. Approximately one-third of children with a Child Cross-Sectional Weight also completed the time diary. The mean of the Child Time Diary Weight is thus approximately three times the mean of the Child Cross-Sectional Weight. The sum of the CDS-2019 Child Longitudinal Weight, 42,688,703, is close to the weighted total population in CDS-2014 of children born from 2002 to 2013 of 42,006,066. The weighted total population of PCGs in CDS-2019 is 39.5 million.

Table 5.9 Summary of CDS-2019 Weights

Weight type (variable name)	Count	1st pct.	50th pct.	99th pct.	Mean	Std. dev.	Coef. var.	Sum total
Child Cross-Sectional Weight (X19CHWGT)	4,629	488.32	13,536.39	60,842.35	15,092.20	13,343.39	88.41	69,861,804
Child In-Home Weight (X19IHWGT)	1,266	1,370.20	34,059.48	239,851.33	48,650.02	52,269.12	107.44	61,590,922
Child Interview Weight (X19CHIWWGT)	1,583	457.97	15,540.81	146,534.07	22,437.44	26,451.70	117.89	35,518,462
Child Time Diary Weight (X19TDWGT)	1,541	1332.03	36,617.69	183,692.17	44,958.49	41,519.39	92.35	69,281,033
Child Longi-tudinal Weight (X19LONGWGT)	2,338	657.68	15,898.49	68,715.43	18,258.64	16,115.56	88.26	42,688,703
PCG Weight (H19PCGWGT)	2,617	488.32	13,587.80	61,947.34	15,095.43	13,536.35	89.67	39,504,741

Recommendations for Using the Weights

In this section, we summarize our recommendations for using the CDS-2019 weights. Our basic recommendation is for data users to use the provided weights in all analyses. In addition, we recommend that, when calculating standard errors, data users should wherever possible account for the sample design features of the CDS-2019 data. To account for the stratification and clustering in the Core PSID sample design, the analyst can use, respectively, the sampling error stratum (ER31996) and sampling error cluster (ER31997) variables. Because CDS-2019 comprises a subset of the Core PSID sample, users may encounter instances where a cluster includes a single observation when analyzing the CDS-2019 data. Several statistical software programs have options to handle the single cluster issue and we recommend reading the statistical software manual or consulting with a survey statistician when this arises. Analysts could also consider accounting for the clustering of the sample by family so that the standard errors reflect the fact that siblings are more likely to have similar outcomes and characteristics than children selected at random. Controlling for family-level clustering of siblings also provides an appropriate correction due to clustering of families by household or neighborhood and recognizes the fact that often it is only possible to control for a single level of clustering.

When analyses focus on a subset of children (from the full sample, for the in-home components, the child interviews, or the time diaries), data users should use an appropriate “sub-population”

adjustment. Clustering-corrected standard errors and sub-population commands are available in most standard statistical software (including SAS and Stata).

Child Cross-Sectional Weight (X19CHWGT)

This weight should be used for all cross-sectional analyses in which the full sample of children in CDS-2019 are the focus of the analysis. This is the weight to use with data from the PCG-Child Instrument.

Child In-Home Weight (X19IHWGT)

This weight should be used for all analyses in which the analysis focuses on measures available only in the in-home components of CDS-2019, which covers the Woodcock-Johnson IV Tests of Achievement in reading and math.

Child Interview Weight (X19CHIWWGT)

This weight should be used for all analyses of data from the Child Interviews conducted in CDS-2019, which were obtained for children aged 8–17 years.

Child Time Diary Weight (X19TDWGT)

This weight should be used for all analyses of time diary data collected in CDS-2019 before the suspension of home visits on 14 March 2020, as identified by the variable X19TDRES.

Child Longitudinal Weight (X19LONGWGT)

The Child Longitudinal Weight is designed for panel analyses of child-level data between CDS waves in 2014 and 2019. For example, this weight should be used when analyzing the change from CDS-2014 to CDS-2019 in the PCG-Child interview data.

PCG Weight (H19PCGWGT)

This weight should be used for all analyses in which the sample of PCGs in CDS-2019 are the focus of the analysis. This is the weight to use with data from the PCG Household Instrument or for other data on PCGs.

Finally, if users have questions about whether their analyses should be weighted or unweighted or about how to reflect the sampling design in their calculation of parameter estimates and standard errors, they should consult with a survey statistician.

Appendix

Table A.1. Logistic Regression Model Results for CDS-2019 Main Child Response

Variable	Estimate	Std. err.	P-value	Significance
PSID sample source				
SRC sample (ref.)	.	.	.	
SEO sample	-0.188	0.116	0.106	
1997/1999 new immigrant sample	-0.266	0.143	0.063	
2017/2019 new immigrant sample	-0.734	0.132	<.0001	***
Child is male (0/1)	-0.041	0.057	0.472	
Child age at 2019 Core PSID (years)	-0.016	0.007	0.014	*
Child race/ethnicity				
Non-Hispanic White (ref.)	.	.	.	
Hispanic	0.304	0.118	0.010	**
Non-Hispanic Black	0.279	0.115	0.015	*
Non-Hispanic Other	0.142	0.231	0.539	
Age of household reference person				
≤30 years	-0.007	0.087	0.936	
31–45 years (ref.)	.	.	.	
≥46 years	0.045	0.083	0.592	
Household reference person is male (0/1)	-0.028	0.078	0.724	
Education of household reference person				
≤11 years	-0.308	0.100	0.002	**
12 years	-0.376	0.087	<.0001	***
13–15 years	-0.271	0.085	0.002	**
≥16 years (ref.)	.	.	.	
Education unknown	-0.709	0.225	0.002	**
Household reference person is employed (0/1)	-0.200	0.122	0.101	
Family income quartile				
1st quartile	0.189	0.109	0.084	
2nd quartile	0.124	0.093	0.184	
3rd quartile	0.069	0.085	0.416	
4th quartile (ref.)	.	.	.	
Region				
South (ref.)	.	.	.	
Northeast	0.184	0.337	0.586	
North Central	-0.018	0.153	0.907	
West	-0.431	0.246	0.080	
Outside US	2.138	0.739	0.004	**
Metro area (0/1)	-0.117	0.121	0.335	
Northeast region x metro area (0/1)	-0.049	0.351	0.889	
North Central region x metro area (0/1)	0.234	0.171	0.171	
West region x metro area (0/1)	0.905	0.261	0.001	***
Number of children in family				
1	0.114	0.084	0.172	
2 (ref.)	.	.	.	
3	-0.051	0.074	0.494	
4+	-0.491	0.079	<.0001	***
Child's individual weight from 2019 Core PSID	0.001	0.002	0.715	
Hosmer and Lemeshow goodness-of-fit test:	6.2699 (8 df), p=0.6170			

Note: *p≤0.05, **p≤0.01, ***p≤0.001; N=6,435 (response=4,629, nonresponse=1,806).

Table A.2. Post-Stratification Cells for CDS-2019 Child Cross-Sectional Weight

Cell	Birth Year	Sex	Race/ethnicity	Region	CDS sample size	CDS weighted estimate	ACS population totals	Adjustment factor
1	2002-2003	F	NH Black	Not South	30	336,674	268,036	0.79613
2	2002-2003	F	NH Black	South	62	525,978	340,203	0.64680
3	2002-2003	F	NH White/Other	Midwest	31	673,246	625,720	0.92941
4	2002-2003	F	NH White/Other	South	27	610,519	821,631	1.34579
5	2002-2003	F	NH White/Other	West	22	522,246	505,155	0.96727
6	2002-2003	M	NH Black	Not South	35	541,075	271,896	0.50251
7	2002-2003	M	NH Black	South	69	399,525	359,740	0.90042
8	2002-2003	M	NH White/Other	Midwest	30	815,767	655,289	0.80328
9	2002-2003	M	NH White/Other	South	31	819,899	882,351	1.07617
10	2002-2005	F	Hispanic	Not West	55	1,218,050	1,203,222	0.98783
11	2002-2005	F	Hispanic	West	43	1,098,052	803,156	0.73144
12	2002-2005	F	NH White/Other	Northeast	28	705,440	878,140	1.24481
13	2002-2005	M	Hispanic	Not West	81	1,726,160	1,263,344	0.73188
14	2002-2005	M	Hispanic	West	43	1,087,384	825,226	0.75891
15	2002-2005	M	NH White/Other	Northeast	27	783,326	918,973	1.17317
16	2002-2005	M	NH White/Other	West	37	942,114	1,089,112	1.15603
17	2004-2005	F	NH Black	Not South	38	381,506	274,469	0.71943
18	2004-2005	F	NH Black	South	74	491,640	376,258	0.76531
19	2004-2005	F	NH White/Other	Midwest	42	900,309	639,913	0.71077
20	2004-2005	F	NH White/Other	South	48	1,073,495	869,105	0.80960
21	2004-2005	F	NH White/Other	West	25	512,286	533,432	1.04128
22	2004-2005	M	NH Black	Not South	30	386,418	293,962	0.76074
23	2004-2005	M	NH Black	South	65	405,281	370,195	0.91343
24	2004-2005	M	NH White/Other	Midwest	28	730,384	660,155	0.90385
25	2004-2005	M	NH White/Other	South	29	796,785	878,850	1.10299
26	2006-2007	F	NH Black	Not South	39	360,213	294,980	0.81890
27	2006-2007	F	NH Black	South	84	495,571	379,517	0.76582
28	2006-2007	F	NH White/Other	Midwest	32	585,155	637,973	1.09026
29	2006-2007	F	NH White/Other	South	35	798,855	847,696	1.06114
30	2006-2007	F	NH White/Other	West	34	694,403	538,290	0.77518
31	2006-2007	M	NH Black	Not South	28	263,404	308,257	1.17028
32	2006-2007	M	NH Black	South	62	278,732	408,915	1.46706
33	2006-2007	M	NH White/Other	Midwest	42	851,044	656,770	0.77172
34	2006-2007	M	NH White/Other	South	39	875,539	903,329	1.03174
35	2006-2009	F	Hispanic	Not West	48	930,313	1,341,513	1.44200
36	2006-2009	F	Hispanic	West	41	786,112	843,335	1.07279
37	2006-2009	F	NH White/Other	Northeast	31	650,737	832,095	1.27870
38	2006-2009	M	Hispanic	Not West	62	1,357,046	1,393,008	1.02650
39	2006-2009	M	Hispanic	West	48	1,116,569	898,871	0.80503
40	2006-2009	M	NH White/Other	Northeast	32	863,948	878,126	1.01641
41	2006-2009	M	NH White/Other	West	33	705,974	1,112,752	1.57619
42	2008-2009	F	NH Black	Not South	46	292,305	293,851	1.00529
43	2008-2009	F	NH Black	South	73	381,555	383,269	1.00449
44	2008-2009	F	NH White/Other	Midwest	50	866,890	622,618	0.71822
45	2008-2009	F	NH White/Other	South	34	809,346	815,122	1.00714
46	2008-2009	F	NH White/Other	West	24	481,650	521,397	1.08252
47	2008-2009	M	NH Black	Not South	39	391,511	310,671	0.79352
48	2008-2009	M	NH Black	South	64	286,174	413,286	1.44418
49	2008-2009	M	NH White/Other	Midwest	41	740,692	646,748	0.87317
50	2008-2009	M	NH White/Other	South	41	1,009,637	872,828	0.86450
51	2010-2011	F	NH Black	Not South	40	244,017	296,753	1.21612
52	2010-2011	F	NH Black	South	65	254,598	377,392	1.48230
53	2010-2011	F	NH White/Other	Midwest	28	459,120	581,977	1.26759
54	2010-2011	F	NH White/Other	South	32	553,107	792,953	1.43363
55	2010-2011	F	NH White/Other	West	20	356,245	500,779	1.40571

Cell	Birth Year	Sex	Race/ethnicity	Region	CDS sample size	CDS weighted estimate	ACS population totals	Adjustment factor
56	2010-2011	M	NH Black	Not South	36	183,704	303,019	1.64950
57	2010-2011	M	NH Black	South	78	453,671	379,242	0.83594
58	2010-2011	M	NH White/Other	Midwest	36	779,250	616,679	0.79137
59	2010-2011	M	NH White/Other	South	37	963,350	824,261	0.85562
60	2010-2013	F	Hispanic	Not West	60	1,155,827	1,218,602	1.05431
61	2010-2013	F	Hispanic	West	43	754,973	760,496	1.00732
62	2010-2013	F	NH White/Other	Northeast	34	759,209	764,749	1.00730
63	2010-2013	M	Hispanic	Not West	68	1,108,826	1,266,814	1.14248
64	2010-2013	M	Hispanic	West	45	878,908	803,705	0.91444
65	2010-2013	M	NH White/Other	Northeast	34	803,334	795,903	0.99075
66	2010-2013	M	NH White/Other	West	38	816,584	1,050,327	1.28625
67	2012-2013	F	NH Black	Not South	45	298,721	268,511	0.89887
68	2012-2013	F	NH Black	South	67	374,703	348,613	0.93037
69	2012-2013	F	NH White/Other	Midwest	38	650,895	578,033	0.88806
70	2012-2013	F	NH White/Other	South	39	686,552	767,950	1.11856
71	2012-2013	F	NH White/Other	West	29	504,532	487,741	0.96672
72	2012-2013	M	NH Black	Not South	40	284,678	268,627	0.94362
73	2012-2013	M	NH Black	South	59	242,170	356,342	1.47145
74	2012-2013	M	NH White/Other	Midwest	41	672,994	623,557	0.92654
75	2012-2013	M	NH White/Other	South	29	585,038	793,193	1.35580
76	2014-2015	F	NH Black	Not South	41	331,199	274,511	0.82884
77	2014-2015	F	NH Black	South	67	304,876	349,732	1.14713
78	2014-2015	F	NH White/Other	Midwest	36	513,486	592,175	1.15324
79	2014-2015	F	NH White/Other	South	44	710,284	792,958	1.11640
80	2014-2015	F	NH White/Other	West	24	434,094	510,386	1.17575
81	2014-2015	M	NH Black	Not South	38	266,586	280,775	1.05322
82	2014-2015	M	NH Black	South	90	384,928	372,483	0.96767
83	2014-2015	M	NH White/Other	Midwest	38	575,131	630,828	1.09684
84	2014-2015	M	NH White/Other	South	39	749,711	820,708	1.09470
85	2014-2018	F	Hispanic	Not West	66	1,133,429	1,523,318	1.34399
86	2014-2018	F	Hispanic	West	54	1,082,376	952,241	0.87977
87	2014-2018	F	NH White/Other	Northeast	36	668,462	951,831	1.42391
88	2014-2018	M	Hispanic	Not West	74	1,196,377	1,617,108	1.35167
89	2014-2018	M	Hispanic	West	40	707,143	998,288	1.41172
90	2014-2018	M	NH White/Other	Northeast	49	926,721	1,014,799	1.09504
91	2014-2018	M	NH White/Other	West	52	989,948	1,289,304	1.30240
92	2016-2018	F	NH Black	Not South	49	352,078	414,186	1.17640
93	2016-2018	F	NH Black	South	102	432,136	512,050	1.18493
94	2016-2018	F	NH White/Other	Midwest	57	971,093	866,950	0.89276
95	2016-2018	F	NH White/Other	South	73	1,261,367	1,119,842	0.88780
96	2016-2018	F	NH White/Other	West	27	450,131	741,302	1.64686
97	2016-2018	M	NH Black	Not South	67	318,841	413,100	1.29563
98	2016-2018	M	NH Black	South	98	400,027	524,901	1.31216
99	2016-2018	M	NH White/Other	Midwest	67	973,932	913,434	0.93788
100	2016-2018	M	NH White/Other	South	51	931,476	1,214,855	1.30423

Table A.3. Logistic Regression Model Results for CDS-2019 Child In-Home Module Response

Variable	Estimate	Std. err.	P-value	Significance
PSID sample source				
SRC sample (ref.)	.	.	.	
SEO sample	0.048	0.137	0.723	
1997/1999 new immigrant sample	-0.417	0.178	0.019	*
2017/2019 new immigrant sample	-0.122	0.181	0.501	
Child is male (0/1)	-0.066	0.071	0.355	
Child birth year				
2002–2007 (ref.)	.	.	.	
2008–2012	0.445	0.086	<.0001	***
2013–2016	0.126	0.099	0.204	
Child race/ethnicity				
Non-Hispanic White (ref.)	.	.	.	
Hispanic	-0.023	0.145	0.873	
Non-Hispanic Black	-0.023	0.139	0.867	
Non-Hispanic Other	-0.064	0.294	0.828	
Age of household reference person				
≤30 years	-0.134	0.113	0.237	
31–45 years (ref.)	.	.	.	
≥46 years	0.174	0.100	0.081	
Household reference person is male (0/1)	-0.265	0.096	0.005	**
Education of household reference person				
≤11 years	-0.186	0.124	0.133	
12 years	-0.380	0.110	0.001	***
13–15 years	-0.255	0.103	0.014	*
≥16 years (ref.)	.	.	.	
Education unknown	-0.347	0.355	0.328	
Household reference person is employed (0/1)	0.259	0.144	0.071	
Family income quartile				
1st quartile	0.250	0.141	0.076	
2nd quartile	0.356	0.120	0.003	**
3rd quartile	0.098	0.110	0.373	
4th quartile (ref.)	.	.	.	
Region				
South (ref.)	.	.	.	
Northeast	-2.326	1.033	0.024	*
North Central	-0.092	0.205	0.654	
West	0.729	0.361	0.044	*
Metro area (0/1)	-0.370	0.158	0.019	*
Northeast region x metro area (0/1)	2.443	1.041	0.019	*
North Central region x metro area (0/1)	0.034	0.226	0.880	
West region x metro area (0/1)	-0.493	0.374	0.188	
Number of children in family				
1	0.015	0.102	0.883	
2 (ref.)				
3	0.176	0.090	0.051	
4+	-0.114	0.110	0.301	
Proximity of interviewer and cluster size				
Within interviewer's local area (ref.)	.	.	.	
Area requires interviewer travel – large clusters	-0.248	0.115	0.030	*
Area requires interviewer travel – medium clusters	-1.036	0.121	<.0001	***
Area requires interviewer travel – small clusters	-1.431	0.160	<.0001	***
CDS-2019 Child Cross-Sectional Weight	<.0001	<.0001	0.455	

Variable	Estimate	Std. err.	P-value	Significance
Child behavioral problems index (BPI, 0–27)				
0	-0.318	0.122	0.009	**
1–3 (ref.)	.	.	.	
4–6	0.099	0.108	0.358	
7–10	0.120	0.110	0.277	
11–15	0.132	0.122	0.279	
16+	0.506	0.141	0.0003	***
Safety of the local neighborhood				
Completely safe	-0.102	0.082	0.216	
Fairly safe (ref.)	.	.	.	
Somewhat dangerous	-0.252	0.117	0.031	*
Extremely dangerous	0.172	0.244	0.481	
Child health status				
Fair or poor	-0.065	0.220	0.767	
Good	0.125	0.117	0.285	
Very good	-0.132	0.082	0.107	
Excellent (ref.)	.	.	.	
Family food security status				
High food security (ref.)	.	.	.	
Marginal food security	0.220	0.118	0.063	
Low food security	0.088	0.124	0.475	
Very low food security	0.352	0.155	0.023	*
PCG psychological distress scale (0–24)				
0 (ref.)	.	.	.	
1	-0.008	0.152	0.958	
2	0.062	0.144	0.667	
3	0.218	0.141	0.122	
4	0.050	0.146	0.733	
5	-0.060	0.161	0.711	
6	0.069	0.159	0.664	
7–9	-0.251	0.154	0.105	
10+	-0.054	0.166	0.746	
Hosmer and Lemeshow goodness-of-fit test:	1.9283 (8 df) p=0.9831			

Note: *p≤0.05, **p≤0.01, ***p≤0.001; N=4,044 (response=1,266, nonresponse=2,778).

Table A.4. Post-Stratification Cells for CDS-2019 Child In-Home Weight

Cell	Birth Year	Sex	Race/ethnicity	Region	CDS sample size	CDS weighted estimate	ACS population totals	Adjustment factor
1	2002	F	NH Black	Not South	7	74,114	131,541	1.77485
2	2002	F	NH Black	South	13	131,847	170,645	1.29427
3	2002	F	NH White/Other	All Regions	10	813,944	1,190,226	1.46230
4	2002	M	NH Black	All Regions	15	344,142	310,160	0.90126
5	2002-2004	F	Hispanic	Not West	8	783,909	877,580	1.11949
6	2002-2004	F	Hispanic	West	10	657,447	588,573	0.89524
7	2002-2004	M	Hispanic	Not West	14	1,020,743	923,247	0.90449
8	2002-2004	M	Hispanic	West	8	736,517	602,635	0.81822
9	2002-2004	M	NH White/Other	Not South	17	1,766,551	2,489,220	1.40908
10	2002-2004	M	NH White/Other	South	8	722,551	1,319,693	1.82644
11	2003	F	NH White/Other	All Regions	12	884,414	1,199,611	1.35639
12	2003-2004	F	NH Black	Not South	10	388,479	274,121	0.70563
13	2003-2004	F	NH Black	South	28	486,559	355,343	0.73032
14	2003-2004	M	NH Black	Not South	11	330,841	279,613	0.84516
15	2003-2005	M	NH Black	South	29	571,541	554,277	0.96979
16	2004-2007	F	NH White/Other	Midwest	20	1,478,724	1,277,886	0.86418
17	2004-2007	F	NH White/Other	South	26	1,927,731	1,716,801	0.89058
18	2004-2007	F	NH White/Other	West	18	1,010,067	1,071,722	1.06104
19	2004-2011	F	NH White/Other	Northeast	16	1,466,765	1,656,249	1.12919
20	2005-2007	F	Hispanic	Not West	11	1,287,109	995,995	0.77382
21	2005-2007	F	Hispanic	West	11	881,263	639,183	0.72530
22	2005-2007	F	NH Black	Not South	19	474,386	431,823	0.91028
23	2005-2007	F	NH Black	South	37	541,080	569,990	1.05343
24	2005-2007	M	Hispanic	West	10	757,177	668,082	0.88233
25	2005-2007	M	NH Black	Not South	19	653,962	460,000	0.70340
26	2005-2007	M	NH White/Other	Midwest	16	1,050,088	984,259	0.93731
27	2005-2007	M	NH White/Other	South	17	1,451,570	1,344,837	0.92647
28	2005-2008	M	Hispanic	Not West	11	1,061,121	1,378,052	1.29868
29	2005-2011	M	NH White/Other	Northeast	14	1,776,922	1,521,254	0.85612
30	2005-2011	M	NH White/Other	West	23	2,149,265	1,912,970	0.89006
31	2006-2009	M	NH Black	South	45	623,860	822,201	1.31793
32	2008-2011	F	Hispanic	Not West	20	1,744,959	1,292,423	0.74066
33	2008-2011	F	Hispanic	West	10	520,823	810,733	1.55664
34	2008-2011	F	NH Black	Not South	34	410,846	590,604	1.43753
35	2008-2011	F	NH Black	South	57	770,490	760,661	0.98724
36	2008-2011	F	NH White/Other	Midwest	25	1,498,961	1,204,595	0.80362
37	2008-2011	F	NH White/Other	South	26	1,627,341	1,608,075	0.98816
38	2008-2011	F	NH White/Other	West	12	614,648	1,022,176	1.66303
39	2008-2011	M	Hispanic	West	19	1,180,706	871,389	0.73802
40	2008-2011	M	NH Black	Not South	30	446,340	613,690	1.37494
41	2008-2011	M	NH Black	South	31	554,951	379,242	0.68338
42	2008-2011	M	NH White/Other	Midwest	26	1,401,173	1,263,427	0.90169
43	2008-2011	M	NH White/Other	South	21	1,256,772	1,697,089	1.35036
44	2009-2011	M	Hispanic	Not West	16	1,103,110	998,573	0.90523
45	2012-2016	F	Hispanic	Not West	21	1,598,381	1,518,181	0.94982
46	2012-2016	F	Hispanic	West	15	919,320	951,987	1.03553
47	2012-2016	F	NH Black	Not South	38	640,323	682,473	1.06583
48	2012-2016	F	NH Black	South	54	792,466	874,105	1.10302
49	2012-2016	F	NH White/Other	Midwest	34	2,023,445	1,463,237	0.72314
50	2012-2016	F	NH White/Other	Northeast	10	738,129	949,493	1.28635
51	2012-2016	F	NH White/Other	South	24	1,358,145	1,949,861	1.43568
52	2012-2016	F	NH White/Other	West	18	945,920	1,262,986	1.33519
53	2012-2016	M	Hispanic	Not West	23	1,546,511	1,588,559	1.02719
54	2012-2016	M	Hispanic	West	10	915,202	1,004,363	1.09742
55	2012-2016	M	NH Black	Not South	38	878,456	686,073	0.78100

Cell	Birth Year	Sex	Race/ethnicity	Region	CDS sample size	CDS weighted estimate	ACS population totals	Adjustment factor
56	2012-2016	M	NH Black	South	56	991,506	902,230	0.90996
57	2012-2016	M	NH White/Other	Midwest	30	1,692,528	1,565,615	0.92502
58	2012-2016	M	NH White/Other	Northeast	12	851,207	1,005,297	1.18102
59	2012-2016	M	NH White/Other	South	24	1,992,904	2,049,634	1.02847
60	2012-2016	M	NH White/Other	West	19	1,568,077	1,306,362	0.83310

Table A.5. Logistic Regression Model Results for CDS-2019 Child 2019 Time Diary Response

Variable	Estimate	Std. err.	P-value	Significance
PSID sample component				
SRC sample (ref.)	.	.	.	
SEO sample	-0.012	0.125	0.922	
1997/1999 new immigrant sample	-0.390	0.159	0.014	*
2017/2019 new immigrant sample	-0.437	0.169	0.010	*
Child is male (0/1)	0.003	0.064	0.966	
Child birth year				
2002–2007 (ref.)	.	.	.	
2008–2012	0.344	0.083	<.0001	***
2013–2016	0.200	0.093	0.033	*
2017–2018	0.079	0.380	0.835	
Child race/ethnicity				
Non-Hispanic White (ref.)	.	.	.	
Hispanic	-0.128	0.130	0.327	
Non-Hispanic Black	-0.113	0.126	0.369	
Non-Hispanic Other	-0.476	0.279	0.088	
Age of household reference person				
≤30 years	-0.183	0.098	0.062	
31–45 years (ref.)	.	.	.	
≥46 years	0.071	0.094	0.448	
Household reference person is male (0/1)	-0.147	0.088	0.094	
Education of household reference person				
≤11 years	-0.499	0.114	<.0001	***
12 years	-0.533	0.099	<.0001	***
13–15 years	-0.199	0.092	0.030	*
≥16 years (ref.)	.	.	.	
Education unknown	-0.691	0.342	0.044	*
Household reference person is employed (0/1)	0.206	0.132	0.120	
Family income quartile				
1st quartile	0.456	0.128	0.0004	***
2nd quartile	0.372	0.109	0.001	***
3rd quartile	0.288	0.098	0.003	**
4th quartile (ref.)	.	.	.	
Region				
South (ref.)	.	.	.	
Northeast	-1.038	0.505	0.040	*
North Central	-0.239	0.186	0.197	
West	0.893	0.307	0.004	**
Metro area (0/1)	-0.111	0.142	0.433	
Northeast x metro area (0/1)	1.193	0.518	0.021	*
North Central x metro area (0/1)	0.263	0.204	0.199	
West x metro area (0/1)	-0.637	0.320	0.047	*
Number of children in the family unit				
1	-0.064	0.090	0.479	
2 (ref.)	.	.	.	
3	0.045	0.082	0.585	
4+	-0.145	0.100	0.148	
Proximity of interviewer and cluster size				
Within interviewer's local area (ref.)	.	.	.	
Area requires interviewer travel – large clusters	-0.364	0.108	0.001	***
Area requires interviewer travel – medium clusters	-0.573	0.101	<.0001	***
Area requires interviewer travel – small clusters	-0.642	0.124	<.0001	***

Variable	Estimate	Std. err.	P-value	Significance
CDS-2019 Child Cross-Sectional Weight	<.0001	<.0001	0.259	
Child behavioral problems index (BPI, 0–27)				
0	-0.163	0.115	0.156	
1–3 (ref.)	.	.	.	
4–6	0.010	0.104	0.924	
7–10	-0.030	0.106	0.777	
11–15	-0.087	0.117	0.461	
16+	0.346	0.132	0.009	**
Child age ≤2 years	0.188	0.372	0.614	
Family food security status				
High food security (ref)	.	.	.	
Marginal food security	0.248	0.105	0.018	*
Low food security	-0.017	0.114	0.879	
Very low food security	0.473	0.137	0.001	***
Hosmer and Lemeshow goodness-of-fit test:	8.9359 (8 df), p=0.3477			

Note: * p≤0.05, **p≤0.01, ***p≤0.001; N=4,592 (response=1,541, nonresponse=3,051).

Table A.6. Post-Stratification Cells for CDS-2019 Child 2019 Time Diary Weight

Cell	Birth Year	Sex	Race/ethnicity	Region	CDS sample size	CDS weighted estimate	ACS population totals	Adjustment factor
1	2002	F	NH Black	Not South	8	94,613	131,541	1.39031
2	2002	F	NH Black	South	14	176,881	170,645	0.96475
3	2002	F	NH White/Other	All Regions	12	699,374	1,190,226	1.70185
4	2002	M	NH Black	All Regions	13	438,194	310,160	0.70781
5	2002-2004	F	Hispanic	Not West	12	957,139	877,580	0.91688
6	2002-2004	F	Hispanic	West	7	419,351	588,573	1.40353
7	2002-2004	M	Hispanic	Not West	14	905,186	923,247	1.01995
8	2002-2004	M	NH White/Other	Midwest	13	1,031,122	987,955	0.95814
9	2002-2004	M	NH White/Other	Northeast/West	15	1,326,808	1,501,265	1.13149
10	2002-2004	M	NH White/Other	South	12	1,225,887	1,319,693	1.07652
11	2002-2005	M	Hispanic	West	11	854,937	825,226	0.96525
12	2003-2004	F	NH Black	South	25	485,203	355,343	0.73236
13	2003-2004	M	NH Black	South	21	268,996	361,001	1.34203
14	2003-2007	F	NH Black	Not South	25	726,102	705,944	0.97224
15	2003-2007	F	NH White/Other	Midwest	22	1,413,493	1,585,550	1.12172
16	2003-2007	F	NH White/Other	South	30	2,424,104	2,133,664	0.88019
17	2003-2007	F	NH White/Other	West	31	1,547,176	1,328,127	0.85842
18	2003-2007	M	NH Black	Not South	34	999,651	739,613	0.73987
19	2003-2011	F	NH White/Other	Northeast	21	1,524,354	1,874,928	1.22998
20	2005-2007	F	Hispanic	Not West	13	1,251,765	995,995	0.79567
21	2005-2007	F	Hispanic	West	11	776,221	639,183	0.82345
22	2005-2007	F	NH Black	South	35	450,305	569,990	1.26579
23	2005-2007	M	NH Black	South	23	492,249	602,191	1.22335
24	2005-2007	M	NH White/Other	Midwest	18	1,280,924	984,259	0.76840
25	2005-2007	M	NH White/Other	South	20	1,625,346	1,344,837	0.82742
26	2005-2008	M	Hispanic	Not West	13	871,359	1,378,052	1.58150
27	2005-2011	M	NH White/Other	Northeast	13	1,126,808	1,521,254	1.35006
28	2005-2011	M	NH White/Other	West	33	2,574,985	1,912,970	0.74291
29	2006-2011	M	Hispanic	West	22	1,297,323	1,316,880	1.01508
30	2008-2011	F	Hispanic	Not West	16	1,403,839	1,292,423	0.92064
31	2008-2011	F	Hispanic	West	13	723,458	810,733	1.12064
32	2008-2011	F	NH Black	Not South	30	432,346	590,604	1.36605
33	2008-2011	F	NH Black	South	52	792,381	760,661	0.95997
34	2008-2011	F	NH White/Other	Midwest	28	1,157,359	1,204,595	1.04081
35	2008-2011	F	NH White/Other	South	25	1,645,599	1,608,075	0.97720
36	2008-2011	F	NH White/Other	West	15	685,389	1,022,176	1.49138
37	2008-2011	M	NH Black	Not South	31	530,172	613,690	1.15753
38	2008-2011	M	NH Black	South	56	931,912	792,528	0.85043
39	2008-2011	M	NH White/Other	Midwest	28	1,178,030	1,263,427	1.07249
40	2008-2011	M	NH White/Other	South	28	1,618,647	1,697,089	1.04846
41	2009-2011	M	Hispanic	Not West	19	1,330,043	998,573	0.75078
42	2012-2014	F	Hispanic	Not West	14	965,219	874,274	0.90578
43	2012-2014	F	Hispanic	West	13	734,567	563,075	0.76654
44	2012-2014	F	NH Black	Not South	23	324,905	401,715	1.23641
45	2012-2014	F	NH Black	South	35	339,273	525,168	1.54792
46	2012-2014	F	NH White/Other	Midwest	22	1,118,129	875,110	0.78266
47	2012-2014	F	NH White/Other	South	15	844,664	1,149,451	1.36084
48	2012-2014	F	NH White/Other	West	18	771,312	739,495	0.95875
49	2012-2014	M	Hispanic	Not West	17	927,149	932,199	1.00545
50	2012-2014	M	NH Black	Not South	19	274,186	409,640	1.49402
51	2012-2014	M	NH Black	South	37	744,616	531,794	0.71419
52	2012-2014	M	NH White/Other	Midwest	20	910,186	928,459	1.02008
53	2012-2014	M	NH White/Other	South	14	856,644	1,199,107	1.39977
54	2012-2018	F	NH White/Other	Northeast	22	1,595,699	1,333,235	0.83552
55	2012-2018	M	Hispanic	West	15	1,177,188	1,383,984	1.17567
56	2012-2018	M	NH White/Other	Northeast	19	945,782	1,398,821	1.47901
57	2012-2018	M	NH White/Other	West	35	2,000,210	1,814,986	0.90740
58	2015-2018	F	Hispanic	Not West	19	1,600,404	1,246,383	0.77879
59	2015-2018	F	Hispanic	West	10	427,555	757,664	1.77209
60	2015-2018	F	NH Black	Not South	30	710,097	555,493	0.78228

Cell	Birth Year	Sex	Race/ethnicity	Region	CDS sample size	CDS weighted estimate	ACS population totals	Adjustment factor
61	2015-2018	F	NH Black	South	46	836,167	685,227	0.81949
62	2015-2018	F	NH White/Other	Midwest	19	819,936	1,162,048	1.41724
63	2015-2018	F	NH White/Other	South	32	1,659,196	1,531,299	0.92292
64	2015-2018	F	NH White/Other	West	16	1,014,599	999,934	0.98555
65	2015-2018	M	Hispanic	Not West	12	983,077	1,308,203	1.33072
66	2015-2018	M	NH Black	Not South	36	771,951	552,862	0.71619
67	2015-2018	M	NH Black	South	40	440,600	721,932	1.63852
68	2015-2018	M	NH White/Other	Midwest	32	1,671,617	1,239,360	0.74141
69	2015-2018	M	NH White/Other	South	29	2,199,163	1,629,649	0.74103

Table A.7. Logistic Regression Model Results for CDS-2019 Main Child Response among Children from CDS-2014

Variable	Estimate	Std. err.	P-value	Significance
PSID sample source				
SRC sample (ref.)	.	.	.	
SEO sample	-0.329	0.173	0.058	
1997/1999 new immigrant sample	-0.135	0.197	0.495	
Child is male (0/1)	-0.143	0.082	0.083	
Child birth year	-0.012	0.015	0.445	
Child race/ethnicity				
Non-Hispanic White (ref.)	.	.	.	
Hispanic	0.386	0.178	0.030	*
Non-Hispanic Black	0.666	0.172	<0.001	***
Non-Hispanic Other	-0.345	0.257	0.179	
Number of children in family				
1	0.117	0.115	0.308	
2 (ref.)	.	.	.	
3	-0.138	0.108	0.204	
4+	-0.551	0.121	<.0001	***
Age of household reference person				
≤30 years	-0.273	0.103	0.008	**
31–45 years (ref.)	.	.	.	
≥46 years	-0.108	0.146	0.460	
Household reference person is male (0/1)	0.054	0.116	0.641	
Education of household reference person				
≤11 years	-0.117	0.152	0.445	
12 years	-0.214	0.128	0.096	
13-15 years	-0.208	0.122	0.087	
≥16 years (ref.)	.	.	.	
Education unknown	-0.648	0.360	0.072	
Household reference person is employed (0/1)	-0.355	0.156	0.023	*
Family income quartile				
1st quartile	0.303	0.171	0.076	
2nd quartile	0.327	0.144	0.023	*
3rd quartile	0.256	0.125	0.041	*
4th quartile (ref.)	.	.	.	
Region				
South (ref.)	.	.	.	
Northeast	0.367	0.154	0.017	*
North Central	0.276	0.107	0.010	**
West	0.317	0.128	0.013	*
Outside US	0.262	0.594	0.660	
Metro area (0/1)	0.087	0.101	0.389	
CDS-2014 Child Weight	<.0001	<.0001	0.155	
CDS-2014 child health status				
Fair or poor	-0.176	0.288	0.541	
Good	-0.245	0.144	0.088	
Very good	-0.069	0.099	0.488	
Excellent (ref.)	.	.	.	
Child birthweight (lbs.)	0.002	0.002	0.184	
CDS-2014 child had ear infections (0/1)	-0.088	0.105	0.402	
CDS-2014 child speech impairment (0/1)	-0.066	0.145	0.651	
CDS-2014 child developmental delay (0/1)	0.237	0.186	0.201	
CDS-2014 child had allergies (0/1)	-0.004	0.100	0.971	
CDS-2014 child was obese (0/1)	0.044	0.167	0.791	
CDS-2014 child limit on athletics (0/1)	0.174	0.245	0.478	

Variable	Estimate	Std. err.	P-value	Significance
CDS-2014 child had wheezing attack				
Never (ref.)	.	.	.	
Fewer than 3 times	0.029	0.131	0.826	
4–10 times	0.701	0.257	0.006	**
More than once a month	-0.141	0.239	0.556	
CDS-2014 child visited doctor for illness/injury (0/1)	0.002	0.012	0.890	
CDS-2014 child immunization up to date (0/1)	0.196	0.241	0.416	
CDS-2014 time since last well child visit				
<1 year (ref.)	.	.	.	
1–2 years	0.013	0.139	0.928	
>2 years	-0.126	0.247	0.611	
CDS-2014 child eats breakfast (0/1)	0.131	0.132	0.319	
CDS-2014 child uses computer at home (0/1)	0.072	0.095	0.444	
CDS-2014 child uses phone or tablet at home (0/1)	-0.034	0.110	0.760	
CDS-2014 PCG psychological distress scale (0–24)				
0 (ref.)	.	.	.	
1	-0.126	0.171	0.461	
2	0.313	0.165	0.058	
3	-0.044	0.156	0.776	
4	-0.003	0.157	0.983	
5	-0.092	0.173	0.596	
6	-0.190	0.180	0.290	
7–9	0.300	0.173	0.083	
10+	0.098	0.208	0.640	
CDS-2014 PCG internet skills scale	-0.034	0.047	0.467	
CDS-2014 PCG Rosenberg self-esteem scale	0.392	0.114	<0.001	***
CDS-2014 PCG aggravation in parenting scale	0.148	0.061	0.015	*
CDS-2014 number of books in home				
≤2	0.221	0.266	0.407	
3-9	0.188	0.134	0.159	
10-19	0.013	0.112	0.910	
≥20 (ref.)	.	.	.	
CDS-2014 family attends religious services (0/1)	0.014	0.005	0.006	**
CDS-2014 importance of religion				
Very important (ref.)	.	.	.	
Somewhat important	0.061	0.100	0.545	
Not important	-0.223	0.153	0.145	
CDS-2014 time lived in neighborhood				
<1 year	-0.051	0.121	0.675	
1–3 years	-0.205	0.108	0.059	
3–5 years	<0.001	0.122	1.000	
≥5 years (ref.)	.	.	.	
CDS-2014 rating of neighborhood				
Excellent (ref.)	.	.	.	
Very good	0.376	0.104	<0.001	***
Good	0.150	0.122	0.220	
Fair	0.244	0.152	0.109	
Poor	0.081	0.255	0.751	
CDS-2014 household food security status				
High food security (ref.)	.	.	.	
Marginal food security	0.179	0.130	0.167	
Low food security	-0.130	0.125	0.302	
Very low food security	-0.015	0.168	0.928	
Hosmer and Lemeshow goodness-of-fit test	11.8198 (8 df) p=0.1594			

Note: *p≤0.05, **p≤0.01, ***p≤0.001; N=3,273 (response=2,338, nonresponse=935).