Early Head Start Research and Evaluation Project (EHSREP):

1996–2010 Measures Compendium

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Ashley Kopack Klein

Charlene Kemmerer

Jerry West

Grace Lim

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I.   Introduction

Early Head Start (EHS) is a two-generation program for pregnant women and families with infants or toddlers. Offered to those with limited incomes, its goal is to enhance children's development and health and to strengthen family and community partnerships. The Early Head Start Research and Evaluation Project (EHSREP), sponsored by the U.S. Department of Health and Human Services, Administration for Children and Families (ACF), was designed to answer questions about the overall impact of EHS programs and services on children and families and reveal how specific types of programs and services affect children and families that have different characteristics and life circumstances. Mathematica Policy Research led the rigorous evaluation, which was launched at about the same time the EHS program was authorized in 1995.

In this data compendium, we provide a single source for information about the measures used throughout the EHSREP. We begin with an overview of the EHSREP design and then report the sample, data collection instruments, and response rates for each of three EHSREP data collection phases (birth to age 3, prekindergarten, and grade 5). Next, we describe the various data sets and documentation that are available to data users, and we provide a general description of how we have organized the more detailed information on the measures we used to create variables and scores for the public use data files. Appendix A contains detailed descriptions of the measures, including measure citations, publisher psychometrics and permissions,[1] the wave or waves in which each measure was used, and information on the scales or variables in the EHSREP data set that were derived from these measures.

II. Overview of the EHSREP

The EHSREP followed 3,001 families with low incomes that included a pregnant woman or an infant younger than 12 months old in 17 sites where the first EHS programs were funded. The women and families were randomly assigned to a program group or a control group. The program group was offered EHS services, and the control group was precluded from receiving EHS services (although its members could receive other services in the community).

EHSREP included three data collection phases and five data collection waves. The initial phase of the evaluation (referred to as "Birth to Three" or "0–3") consisted of (1) an implementation study to document program services and (2) an impact study that followed children and their families until the children were 3 years old to assess the child and family outcomes that EHS programs might influence. During this initial phase, data were collected in three waves: when the children were 14, 24, and 36 months old. Two follow-up phases were conducted, each with one wave of data collection. In the first, families were contacted again in the prekindergarten year (that data collection wave took place in the spring before kindergarten entry, when children were about 5 years old, and is known as the "Prekindergarten Follow-Up" or "PreK" wave). They were also contacted in 5th grade (the data collection wave took place in

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[1]Permission was granted to use the measures/scales in the EHSREP. Any future use of these by researchers would require that they obtain any necessary permissions, unless there is no such requirement imposed by the publisher or developer.

the spring of the children's sixth year of formal schooling, when they were about 10 years old, is known as the "Grade 5 Follow-Up" or "G5" wave). Details about the data collected in each of these waves are provided below.

Local research teams worked on EHSREP in partnership with Mathematica. Together, they formed the EHS Research Consortium to facilitate collaboration between sites in the use of research and evaluation data. The EHS Research Consortium comprises representatives from the 17 programs that participated in the evaluation, 15 local research teams, the evaluation contractors (Mathematica and Columbia University's Center for Children and Families), and ACF. The consortium reviewed instruments, data collection procedures, and data analysis plans and contributed to reporting and dissemination activities. Local research teams or Mathematica were responsible for data collection in the sites. In addition, consortium workgroups conducted research on special topics, such as fatherhood and welfare reform.

A. Descriptions of the EHSREP phases

Birth to Age 3

The 17 EHS programs that participated in EHSREP were purposively selected by the Administration on Children, Youth, and Families (ACYF).[2] The programs, mostly drawn from the Wave I EHS programs that were funded in late 1995, had agreed to participate in research as a condition of funding. Selection was based on proposals submitted to the Head Start Bureau (since renamed the Office of Head Start) by university research teams in partnership with EHS grantees. To be selected, programs had to be able to recruit twice as many families as they could serve and have a feasible research partner (usually university-based). All programs had to produce a geographically broad research sample that represented the programmatic approaches, settings, and family characteristics that were typical of EHS and its families across the country.[3] For research purposes, Mathematica characterized programs according to the programmatic approach they offered to families: (1) home-based, (2) center-based, or (3) mixed.[4]

In the spring of 1996, when the programs were selected, Mathematica implemented a random assignment process in combination with each program's regular enrollment process.[5] The sample intake period ended in 1998. During this time, 3,001 families were selected, of which 1,513 were assigned to the program group and 1,488 to the control group. At the time of random assignment, the program group was offered EHS services; the control group was not.

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[2] Head Start's research and program offices were formerly located within ACYF, but are now located within ACF.

[3] Findings from the EHSREP cannot be formally generalized to all EHS programs, because the 17 programs were not randomly selected. However, because of the selection criteria, the characteristics of the selected programs and their enrolled children and families were similar to the characteristics found in other EHS programs funded during this time. Therefore, findings from EHSREP most likely generally apply to EHS programs when the quality and quantity of the offered services in the selected programs were similar to services offered nationally.

[4] Mixed-approach programs provided both center- and home-based services.

[5] Only families in which the women was pregnant or had children up to 12 months old at the time of enrollment were eligible. One-fourth of the families included a woman who, during enrollment, was pregnant with the focal child.

As outlined in Table II.1, multiple instruments were used to collect data. Baseline data were collected when participants applied to be in EHS. Other follow-up interviews and assessments were conducted on two different schedules. The first was based on the number of months since random assignment, targeted for 6, 15, and 26 months after random assignment (for data on use of services and progress toward self-sufficiency; at those time points, we conducted parent services follow-up interviews). The second, based on children's birth dates, took place when children were 12, 24, and 36 months old. At those time points, we collected data about child and family development through parent interviews and child and family assessments (including direct assessments of children, interviewer observations of children's behavior and home environments, and video recordings of semi-structured parent-child interactions), observations of and interviews with child care providers, interviews with fathers,[6] video recordings of father-child interactions,[7] and exit interviews.[8]

Prekindergarten Follow-Up

After the 0–3 phase of the EHSREP, for the Prekindergarten Follow-Up wave we tracked the children and families in the program and control groups from the time children turned 3 until the summer before they started kindergarten. The goal of the Prekindergarten Follow-Up was to compare the effects of receiving EHS services versus community services on 3-year-old children's school readiness and their parents' functioning, as reflected in their later participation in Head Start or other formal early care and education programs.

To maintain contact with the families and collect data on child care, participation in Head Start programs, and parental income, tracking interviews were scheduled from the time the child turned 3 until just before the Prekindergarten Follow-Up wave began. The data were collected in the spring and summer of 2001, 2002, and 2003. Children with spring and summer birth dates had a two-year interval between the data collected at 36 months and the Prekindergarten Follow-Up data collection; children with fall birth dates might have had a longer interval (depending on the age criteria for kindergarten entry set by state or local school districts, which vary in terms of the date by which the child is required to turn 5).

As shown in Table II.1, the Prekindergarten Follow-Up data collection included: (1) interviews with parents to assess the level of parent and family functioning; (2) assessments of children's kindergarten readiness in terms of attention, preliteracy and emerging numeracy skills, and receptive vocabulary; (3) video recordings of parent-child interactions to reveal

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[6] At 12 sites, during only the two waves at 24 months and 36 months, the children's biological fathers and father figures (as identified by the children's mothers) were interviewed about fathering issues. This study was supported with funding from ACYF and the National Institute of Child Health and Human Development, the Ford Foundation, and the Office of the Assistant Secretary for Planning and Evaluation. Constructed variables from the interviews with fathers were analyzed for reporting purposes, but they are not included in the public use file.

[7] In seven of the sites where fathers were interviewed (during the 24 and 36 month waves only), interviewers also did video recordings of semi-structured father-child interactions. The interactions were coded and the data were recorded in Father Child Record Booklets. However, no constructs were created based on these data.

[8] Exit interviews were usually conducted along with the 36 month parent interviews to gather updated summary information on use of services. For program group members only, the exit interview included questions about their parents' experiences in EHS. No constructs were created based on the exit interview data.

parent-child interaction styles and dyadic relationships; and (4) observations and interviews to show the quality and characteristics of the prekindergarten programs the children attended.

Grade 5 Follow-Up

The goals of the Grade 5 Follow-Up were to (1) determine if EHS had an effect on child and family outcomes when children were in grade 5, and (2) examine children's and families' experiences while the children were in elementary school, and explore how these experiences affected child and family outcomes. Data were collected over a three-year period as children entered grade 5 in the spring of 2007, 2008, or 2009. Data were collected primarily during visits to the children's homes and through a survey of the children's teachers.

As shown in Table II.1, the Grade 5 Follow-Up, like earlier phases, included a child assessment, parent interview, home observations, and video recordings of mother-child interactions. Many of the questions in the parent interview and some of the measures in the child assessments, where appropriate, had also been used in past waves. Some measures that were used in past phases were adapted to be developmentally appropriate for 5th graders. Because children might behave differently in different settings, multiple reporters (parents and teachers) were used to help us determine children's levels of aggressive behavior, hyperactivity, cooperation, and self-control.

Unlike previous waves of EHSREP data collection, the Grade 5 Follow-Up included an interview with the child of focus, as children were now old enough to answer questions. No data on the child's father were collected. School-level data were collected from two school universe survey databases: the U.S. Department of Education's public school universe survey (Common Core of Data) and the private school universe survey (Private School Survey). The child assessment battery was also revised to increase the emphasis on school-related knowledge and skills. New measures of child development that were not used in past rounds were added, such as the Matrix Reasoning subset from the Wechsler Intelligence Scale for Children (Fourth Edition).

B. Summary of sample sizes, instruments, and response rates by wave

Table II.1 documents the sample sizes, instruments, and response rates by wave. During the Birth to Three and Prekindergarten Follow-Up phases of the project, all 3,001 sampled cases were eligible for each wave of data collection. However, to be eligible for the Grade 5 Follow-Up, children or their families had to have child assessment data or parent survey data in at least one of the earlier waves of the study. A total of 2,701 children and families met this criterion.

Table II.1. Sample size, instruments, and response rates, by phase

Phase	Sample size	Timeframe	Instruments	Response rates (combined sample)
Birth to Three (1996–2001)	3,001 families randomly assigned to program group (1,513) or control group (1,488)	Baseline	• Baseline data were collected from the Head Start Family Information System's program application and enrollment forms • Mathematica's Sample Tracking System	
		6, 15, and 26 months after random assignment	• Parent services follow-up interviews	• 81.6% for 6-month follow-up • 75.2% for 15-month follow-up • 69.5% for 26-month follow-up
		Child was 14 months old	• Parent interviews • Child and family assessments (Bayley Scales of Infant Development Mental Development Index; Behavior Rating Scale [Bayley assessments]; video recording of parent-child interactions) • Child care provider interviews and observations (if child was in care that met criteria)	• 78.1% for parent interviews • 62.7% for Bayley assessments • 65.8% for video assessments
		Child was 24 months old[9]	• Parent interviews • Child and family assessments (Bayley assessments; video recording of parent-child interactions) • Child care provider interviews and observations (if child was in care that met criteria) • *Father interviews (only in selected sites)* • *Video recording of father-child interactions and father-child record booklets (only in selected sites)*	• 72.2% for parent interviews • 59.4% for Bayley assessments • 59.9% for video assessments

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[9] Refer to Volume II of *Making a Difference in the Lives of Infants and Toddlers and Their Families: The Impacts of Early Head Start."* Appendix B includes sources of nonresponse, and Appendix D has a description of the nonresponse analyses conducted.

Phase	Sample size	Timeframe	Instruments	Response rates (combined sample)
		Child was 36 months old	• Parent interviews • Child and family assessments (Bayley assessments; video recordings of parent-child interactions; receptive vocabulary assessment) • Child care provider interviews and observations (if child was in care that met criteria) • *Father interviews (only in selected sites)* • *Video recording of father-child interactions and father-child record booklets (only in selected sites)* • *Exit interviews (only in selected sites)*	• 70.3% for parent interviews • 55.3% for Bayley assessments • 55.3% for video assessments
Prekindergarten Follow-Up (2001–2003)	3,001 families randomly assigned to the program group (1,513) or control group (1,488) 2,329 families had any tracking *or* PreK data (2,217 program group; 1.112 control group) 2,142 families had any PreK-only data (not including tracking data) (1,110 program group; 1,032 control group)	• Telephone tracking interviews • Parent interviews • Direct child assessments • Video recording of parent-child interactions • Early care and education provider observations and interviews	• Telephone tracking interviews • Parent interviews • Direct child assessments • Video recording of parent-child interactions • Early care and education provider observations and interviews	• 67.2% for tracking interviews • 68.7% for parent interviews • 62.6% for direct child assessments • 60.3% for parent-child video • *Note: percentages based on the original EHSREP sample of 3,001 families.*

Phase	Sample size	Timeframe	Instruments	Response rates (combined sample)
Grade 5 Follow-Up (2007–2009)	Of the 3,001 families randomly assigned to the program group (1,513) or control group (1,488) in the original EHSREP sample, 2,701 families provided some parent or child assessment data at one or more of the 14-, 24-, 36-month waves, or during the PreK wave; 2,701 families make up the sample for G5.[a]	• Parent interviews • Home observations • Video recording of parent-child interactions • Child assessments • Child interviews • Teacher surveys • School universe data	• Parent interviews • Home observations • Video recording of parent-child interactions • Child assessments • Child interviews • Teacher surveys • School universe data	• 60% for parent interview, home observation • 54% for parent-child video • 58% for child assessment and interview • 61% for teacher survey • *Note: percentages based on the sample of 2,701 families who were eligible for G5 data collection.*

Note: The public use data file does not include data obtained from the instruments shown in italics: father interviews, video recording of father-child interactions, and father-child record booklets, or exit interviews.

[a] The 300 excluded families are technically still part of the sample because they represent a portion of the reference population. No attempt was made to interview 136 families during G5 because 89 families moved out of the country and 47 families were harsh refusals during an earlier wave.

C. EHSREP data sets and documentation

The EHSREP data sets have become an important source of information on the developmental trajectories of children whose families have limited incomes and on the predictors of change and continuity in their development. The data sets contain rich information on the early home environment and parent-child interactions, as well as information on children's educational settings over time. The data are available for secondary analyses at Child Care & Early Education *Research Connections*[10] and the Henry A. Murray Research Archive at Harvard University. *Research Connections* houses the public use data file and related documentation. The public use data file consists of constructed variables from each phase and wave of data collection. It does not contain item-level source data, data collected directly from fathers, or locally collected data.[11] Any user may download the public use files. The Henry A. Murray Research Archive houses restricted use EHSREP data files, which include item-level source data from interviews and assessments, qualitative data, and data from additional sources. In general, users must submit an application for restricted file data use to the Murray Archive, which must approve the application before users can download the restricted use data. The Murray Archive has one set of video and audio files for public use; these must be used onsite. The Murray Archive also houses data collected in the local evaluations, which can only be accessed by members of the EHS research Consortium.[12]

The EHSREP data and accompanying documentation, as well as descriptions of the study and its findings, are available from a variety of sources. For detailed information on the study design, sample, data collection procedures, and response rates for each wave, please refer to the codebook, user guides, and reports in Table II.2.

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[10] *Research Connections* is a partnership between the National Center for Children in Poverty at the Mailman School of Public Health at Columbia University and the Inter-University Consortium for Political and Social Research at the Institute for Social Research, the University of Michigan. It is supported by the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

[11] In addition to the core data collection that took place at all study sites, local research projects were conducted by university-based researchers who partnered with EHS programs. The goal of these local projects was to identify what affects positive child and family development within a specific EHS program and community. Site-specific outcomes and intra-site impacts were examined.

[12] The consortium-only files are similar to the restricted use files. However, the consortium-only files use identification numbers that were used during the study instead of the identification numbers that were created for the public and restricted use files. In addition, there is no data coarsening in the consortium-only files. The consortium-only files contain an additional set of video and audio files.

Table II.2. Relevant EHSREP documentation

Source	Resource
Child Care & Early Education *Research Connections* http://www.researchconnections.org/childcare/studies/3804	• EHSREP construct data file for public use, including data from the Birth to Three, Prekindergarten Follow-up, and Grade 5 Follow-Up phases • Codebook for the entire EHSREP, 1996–2010 • User guide: Birth to Three phase • User guide: Prekindergarten Follow-up phase • User guide: Grade 5 Follow-Up phase
Henry A. Murray Research Archive at Harvard University https://dataverse.harvard.edu/dataverse/EHS	EHSREP restricted use data files: • Baseline data • Child data (includes parent/child video coding): 14, 24, 36 months, PreK, and G5 waves • Parent interview: 14, 24, 36 months, tracking, PreK, and G5 waves • Parent services interview and exit interview: 6, 15, and 26 months, and exit • Father and father/child data: 24 and 36 month and PreK waves • Child care providers/teachers: 14, 24, 36 months, PreK, and G5 waves • EHSREP construct data file for public use • Archive of EHSREP parent-child interaction videos • Consortium-use only files (restricted to EHS Research Consortium members) • User guide: Birth to Three phase • User guide: Prekindergarten Follow-Up phase • User guide: Grade 5 Follow-Up phase EHSREP instruments and documentation
Office of Planning, Research, and Evaluation (OPRE) http://www.acf.hhs.gov/programs/opre/research/project/early-head-start-research-and-evaluation-project-ehsre-1996-2010	• EHSREP study reports • EHSREP presentations and papers • EHSREP instruments • EHSREP research partners
Love J.M., R. Chazan-Cohen, H. Raikes, and J. Brooks-Gunn. "What Makes a Difference: Early Head Start Evaluation Findings in a Developmental Context." *Monographs of the Society for Research and Child Development*, vol. 78, no. 1, Feb. 2013, pp. vii–viii, 1–173.	• Monograph that presents findings from multiple EHSREP analyses that reveal when and how intervention experiences from birth to age 5 may contribute to outcomes for children at school entry when those children come from families with limited income.

III. Descriptions of measures

Descriptions of measures that were used to construct public use variables and scale scores over the life of EHSREP are included in Appendix A. The measures are organized by EHSREP data source: parent report, parent-child interaction, direct child assessment, child care observation, child interview, and child care provider and teacher interview. Measures from the parent report and child interview are categorized further by focus (in other words, whether the focus of the measure was on the child, parent, or family/home). Within a data source, measures are listed alphabetically by measure name.

Each measure entry includes, when available, the relevant citation(s)/copyright statements, publisher psychometrics, publisher permission for use and any limitations on use, and measure notes or a description of the measure. Variables and scales derived from a measure are listed in tables below the applicable measure information. The variable tables include the data wave in which the variable was created, the variable name as it appears in the data file, the variable label as it appears in the data file, source variables when available, EHSREP study psychometrics, and notes on the variable.[13] The number of variables (and variable tables) per measure range from one to 13.

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[13] The Measures Compendium focuses on constructed variables and scales that are available through *Research Connections* as a public use data file. The public use file only contains constructed variables; it does not contain source variables. When provided, the source variables in the measure description are included to: (1) show which source variables were used in the constructed variable, and (2) map back to the source instrument documentation (if allowed by the publisher) to obtain the source item text. For example, if publisher permission for a parent-report measure indicates that the individual source items may be included in the documentation, a researcher can look up those source items in the parent interview instrument.

At a minimum, the EHSREP study's psychometric information contains the sample size, possible or theoretical range, actual range, mean, and standard deviation of each constructed variable. The internal consistency reliability is reported when available (it is generally not available for the 14-month wave) and is pulled from the following sources for each wave: For the 24- and 36-month waves, the sources are *Making a Difference in the Lives of Infants and Toddlers and Their Families: The Impacts of Early Head Start, Volume II: Final Technical Report Appendixes* (June 2002), and *Building Their Futures: How Early Head Start Programs Are Enhancing the Lives of Infants and Toddlers in Low-Income Families, Volume II: Technical Report Appendixes* (June 2001). For the PreK wave, the source is Love J.M., R. Chazan-Cohen, H. Raikes, and J. Brooks-Gunn. "What Makes a Difference: Early Head Start Evaluation Findings in a Developmental Context." *Monographs of the Society for Research and Child Development*, vol. 78, no. 1, Feb. 2013, pp. vii–viii, 1–173. For the G5 Wave, the source is, "Early Head Start Children in Grade 5: Long-Term Follow-Up of the Early Head Start Research and Evaluation Project Study Sample, Final Report." (December 2010). Psychometrics may differ by report, depending on sample size.

The Compendium does not include constructed variables that were created from qualitative data, nor those constructed for local evaluations. These types of variables are available at the Murray Archive.

Appendix A

EHSREP Measures Compendium

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Contents

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Parent-Report Measures, Child

1. **Measure Name: Achenbach System of Empirically-Based Assessment (ASEBA), Child Behavior Checklist**

Citation: Achenbach, Thomas M. and Leslie A. Rescorla. Manual for the ASEBA School-Age Forms & Profiles. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families, 2001.

Achenbach, Thomas M. and Leslie A. Rescorla. Manual for the ASEBA Preschool Forms and Profiles. Burlington, VT: University of Vermont Department of Psychiatry, 2000.

Achenbach, T. M. Manual for Child Behavior Checklist/2-3 and 1992 Profile. Burlington, VT: University of Vermont, Dept. of Psychiatry, 1992.

Achenbach, T.M. Child Behavior Checklist for ages 2-3. Burlington: University of Vermont, 1988.

Achenbach, T. M., Edelbrock, C., & Howell, C. Empirically-based assessment of the behavioral/ emotional problems of 2-3 year old children. Journal of Abnormal Child Psychology, 15, 629-650, 1987

Publisher Psychometrics: Internal consistency reliability at 24 Months = 0.91, at 36 Months = 0.88.

Publisher Permission: Publisher does not permit reproduction of the items. Granted permission to keep "selected" constructed variables. Individual source items are not available in documentation or restricted use files.

Measure Notes: Parents completed items from the Child Behavior Checklist for Ages 1 1/2 to 5 Years (Achenbach and Rescorla 2000), which included all items in the Aggressive subscale, at 24 Months, 36 Months, and Pre-K. Parents were asked 32 items at 24 Months, 39 items at 36 Months, and 52 items at Pre-K. Some behaviors asked about include, "Child has temper tantrums," "Child hits others," and "Child is easily frustrated." At Grade 5, parents complete items from the Child Behavior checklist for Ages 6-18 (Achenbach and Rescorla 2001). Parents were asked about their child's aggressive behavior, activity level (hyperactivity), and other behavioral or emotional items (113 items were included in all). In each wave, the parent was asked how true each of the behaviors were for their child. Responses were coded 1=not true, 2=sometimes or somewhat true, 3=very or often true. Before scales were constructed, all items were recoded to 0=not true, 1=sometimes/somewhat true, 2=very or often true.

1.A. CBCL Aggressive Behavior Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X	X	X	X
Variable Name		B2P_CBCA	B3P_CBCA	B4CBCLAG	B5CB_AGR
Variable Label		24m ACHENBACH ASEBA SCALE SCORE	36m ACHENBACH ASEBA SCALE SCORE	PreK: CBCL aggressive behavior scale (Achenbach ASEBA)	CBCL Aggressive Behavior Raw Score
Source Variables		B2PB01C, B2PB01F, B2PB01G, B2PB01I, B2PB01J, B2PB01N, B2PB01O, B2PB01R, B2PB01U, B2PB01Q, B2PB01V, B2PB01X, B2PB01Y, B2PB01AA, B2PB01BB, B2PB01CC, B2PB01GG, B2PB01HH, B2PB01KK	B2PB01C, B2PB01F, B2PB01G, B2PB01I, B2PB01J, B2PB01N, B2PB01O, B2PB01R, B2PB01U, B2PB01Q, B2PB01V, B2PB01X, B2PB01Y, B2PB01AA, B2PB01BB, B2PB01CC, B2PB01GG, B2PB01HH, B2PB01KK	B4PB01C, B4PB01T, B4PB01W, B4PB01X, B4PB01Z, B4PB01AA, B4PB01DD, B4PB01EE, B4PB01GG, B4PB01HH, B4PB01KK, B4PB01LL, B4PB01MM, B4PB01NN, B4PB01PP, B4PB01QQ, B4PB01RR, B4PB01VV, B4PB01YY	B5PB003, B5PB016, B5PB019, B5PB020, B5PB021, B5PB022, B5PB023, B5PB037, B5PB057, B5PB068, B5PB086, B5PB087, B5PB088, B5PB089, B5PB094, B5PB095, B5PB097, B5PB104
EHSREP Study Psychometrics		Sample size: 2,103; possible range: 0 (minimum) - 38 (maximum); actual range: 0 (minimum) - 30 (maximum); mean: 10.1; standard deviation: 5.6; internal consistency reliability: 0.91	Sample size: 2,031; possible range: 0 (minimum) - 38 (maximum); actual range: 0 (minimum) - 37 (maximum); mean: 11.1; standard deviation: 6.5; internal consistency reliability: 0.88	Sample size: 2,014; possible range: 0 (minimum) - 38 (maximum); actual range: 0 (minimum) - 30 (maximum); mean: 10.9; standard deviation: 6.7; internal consistency reliability: 0.89	Sample size: 1,622; possible range: 0 (minimum) - 36 (maximum); actual range: 0 (minimum) - 30 (maximum); mean: 5.70; standard deviation: 5.72; internal consistency reliability: 0.90 (all); 0.91 (White); 0.89 (African American); 0.87 (Hispanic)

Variable Notes: **24 Month, 36 Month, and Pre-K**: The ASEBA Child Behavior Checklist Aggressive Behavior subscale (2000) measures the incidence of 19 child behavior problems that tend to occur together and constitute aggressive behavior problems. Responses to 19 items are summed and scores can range from 0, if all of the behavior problems are "never" observed (never true) by the parent, to 38, if all of the behavior problems are "often" observed (often true). Higher scores indicate that aggressive behaviors are more typical of the child.

Grade 5: Responses to 18 items are summed and scores can range from 0, if all of the behavior problems are "never" observed (never true) by the parent, to 36, if all of the behavior problems are "often" observed (often true). The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person. Higher scores indicate that aggressive behaviors are more typical of the child.

1.B. CBCL Anxious/Depressed Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_AXR
Variable Label					CBCL Anxious/Depressed Raw Score
Source Variables					B5PB014, B5PB029, B5PB030, B5PB031, B5PB032, B5PB033, B5PB035, B5PB045, B5PB050, B5PB052, B5PB071, B5PB091, B5PB112
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 26 (maximum); actual range: 0 (minimum) - 20 (maximum); mean: 3.06; standard deviation: 3.16; internal consistency reliability: 0.77 (all); 0.78 (White); 0.73 (African American); 0.75 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 13 items are summed with higher scores indicating that anxious/depressed behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

1.C. CBCL Attention Problems Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_APR
Variable Label					CBCL Attention Problems Raw Score
Source Variables					B5PB001, B5PB004, B5PB008, B5PB010, B5PB013, B5PB017, B5PB041, B5PB061, B5PB078, B5PB080
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 20 (maximum); actual range: 0 (minimum) - 20 (maximum); mean: 4.08; standard deviation: 3.80; internal consistency reliability: 0.84 (all); 0.86 (White); 0.81 (African American); 0.81 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 10 items are summed with higher scores indicating that attention problem behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

1.D. CBCL Externalizing Behavior Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_EXR
Variable Label					CBCL Externalizing Raw Score
Source Variables					B5CB_RBR, B5CB_AGR
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 70 (maximum); actual range: 0 (minimum) - 54 (maximum); mean: 8.01; standard deviation: 7.95; internal reliability consistency: 0.91 (all); 0.92 (White); 0.91 (African American); 0.88 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to B5CB_RBR and B5CB_AGR (rule-breaking behavior and aggressive behavior, respectively) are summed. Higher scores indicate that externalizing behaviors are more typical of the child.

1.E. CBCL Internalizing Behavior Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_INR
Variable Label					CBCL Internalizing Raw Score
Source Variables					B5CB_AXR, B5CB_WDR, B5CB_SCR
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 64 (maximum); actual range: 0 (minimum) - 37 (maximum); mean: 5.79; standard deviation: 5.79; internal consistency reliability: 0.85 (all); 0.86 (White); 0.85 (African American); 0.83 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to B5CB_AXR, B5CB_WDR, and B5CB_SCR (anxious/depressed, withdrawn/depressed, and somatic complaints, respectively) are summed. Higher scores indicate that internalizing behaviors are more typical of the child.

1.F. CBCL Rule-Breaking Behavior Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_RBR
Variable Label					CBCL Rule-Breaking Behavior Raw Score
Source Variables					B5PB002, B5PB026, B5PB028, B5PB039, B5PB043, B5PB063, B5PB067, B5PB072, B5PB073, B5PB081, B5PB082, B5PB090, B5PB096, B5PB099, B5PB101, B5PB105, B5PB106
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 34 (maximum); actual range: 0 (minimum) - 24 (maximum); mean: 2.31; standard deviation: 2.65; internal consistency reliability: 0.73 (all); 0.77 (White); 0.71 (African American); 0.61 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 17 items are summed with higher scores indicating that rule-breaking behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

1.G. CBCL Social Problems Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_SPR
Variable Label					CBCL Social Problems Raw Score
Source Variables					B5PB011, B5PB012, B5PB025, B5PB027, B5PB034, B5PB036, B5PB038, B5PB048, B5PB062, B5PB064, B5PB079
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 22 (maximum); actual range: 0 (minimum) - 19 (maximum); mean: 2.67; standard deviation: 2.84; internal consistency reliability: 0.73 (all); 0.77 (White); 0.69 (African American); 0.69 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 11 items are summed with higher scores indicating that social problem behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

1.H. CBCL Somatic Complaints Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_SCR
Variable Label					CBCL Somatic Complaints Raw Score
Source Variables					B5PB047, B5PB049, B5PB051, B5PB054, B5PB056, B5PB056b through B5PB056g
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 22 (maximum); actual range: 0 (minimum) - 11 (maximum); mean: 1.06; standard deviation: 1.72; internal consistency reliability: 0.66 (all); 0.67 (White); 0.69 (African American); 0.60 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 11 items are summed with higher scores indicating that somatic complaint behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

1.I. CBCL Thought Problems Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_TPR
Variable Label					CBCL Thought Problems Raw Score
Source Variables					B5PB009, B5PB018, B5PB040, B5PB046, B5PB058, B5PB059, B5PB060, B5PB066, B5PB070, B5PB076, B5PB083, B5PB084, B5PB085, B5PB092, B5PB100
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 30 (maximum); actual range: 0 (minimum) - 19 (maximum); mean: 2.17; standard deviation: 2.71; internal consistency reliability: 0.71 (all); 0.74 (White); 0.63 (African American); 0.62 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 15 items are summed and higher scores indicating that thought problem behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

1.J. CBCL Withdrawn/Depressed Raw Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5CB_WDR
Variable Label					CBCL Withdrawn/Depressed Raw Score
Source Variables					B5PB005, B5PB042, B5PB065, B5PB069, B5PB075, B5PB102, B5PB103, B5PB111
EHSREP Study Psychometrics					Sample size: 1,622; possible range: 0 (minimum) - 16 (maximum); actual range: 0 (minimum) - 13 (maximum); mean: 1.67; standard deviation: 2.12; internal consistency reliability: 0.72 (all); 0.75 (White); 0.71 (African American); 0.70 (Hispanic)

Variable Notes: The CBCL (Achenbach and Rescorla 2001) is a parent-reported measure of child behavioral and emotional problems. Responses to 8 items are summed with higher scores indicating that withdrawn/depressed behaviors are more typical of the child. The subscale score was set to missing if more than eight items were missing. If data was missing for eight or fewer items, the values of the missing items were imputed with the means of the non-missing items for that person.

2.   Measure Name: Emotionality, Activity, Sociability (EAS) Temperament Survey for Children

Citation: Buss, Arnold H. and Robert Plomin. *Temperament: Early Developing Personality Traits*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1984.

Publisher Psychometrics:

Publisher Permission: Permission to include constructed variables only. Individual source items not available in documentation or restricted use files.

Measure Notes: Buss and Plomin define four temperaments in children: Emotionality, Activity, Sociability, and Impulsivity (EASI). Parents were asked to rate their child from 1 (not very typical of your child) to 5 (very typical of your child) on these scales. Scale scores were created for Emotionality (B1P_EEMO) and Sociability (B1P_ESOC).

2.A. EASI: Emotionality Scale (14 Months)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name	B1P_EEMO				
Variable Label	EASI: Emotionality Scale (14 Months)				
Source Variables	B1P102B, B1P102E, B1P102H, B1P102K, B1P102L				
EHSREP Study Psychometrics	Sample size: 2,334; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 2.96; standard deviation: 0.95				

Variable Notes: B1P_EEMO is an average of the five emotional subscale items in the 14 Month Parent Interview. Higher scores represent that emotionality behaviors (tendency to easily get upset) are more typical of the child.

2.B. EASI: Sociability Scale (14 Months)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name	B1P_ESOC				
Variable Label	EASI: Sociability Scale (14 Months)				
Source Variables	B1P102C, B1P102D, B1P102F, B1P102G, B1P102I				
EHSREP Study Psychometrics	Sample size: 2,334; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 4.12; standard deviation: 0.75				

Variable Notes: B1P_ESOC is an average of the five sociability items in the 14 Month Parent Interview. Higher scores represent that sociability behaviors (preferring to be around others than be alone) are more typical of the child.

3.   Measure Name: MacArthur Communicative Development Inventories

Citation: Fenson, L., P. S. Dale,, J. S. Reznick, D. Thal, E. Bates, J. P. Hartung, et al. *The MacArthur-Bates Communicative Development Inventories: User's Guide and Technical Manual.* Baltimore: Brookes, 1993.

MacArthur Communicative Development Inventories (CDI) Instruments are copyrighted by the MacArthur CDI Advisory Board.

14 Month: MacArthur Communicative Development Inventories, Vocabulary Short Form, Level I; Part II, Section A, First Communicative Gestures; Part II, Section B, Games and Routines

24 Month: MacArthur Communicative Development Inventories Vocabulary Short Form, Level II; Part II, Question on Combining Words; and Section E, Complexity

Fenson, Larry, Elizabeth Bates, Philip Dale, Judith Goodman, J. Steven Reznick, and Donna Thal. "Measuring Variability in Early Child Language: Don't Shoot the Messenger." Child Development, vol. 71, 2000a, pp. 323-328.

Fenson, Larry, Steve Pethick, Connie Renda, Jeffrey L. Cox, Philip S. Dale, and J. Steven Reznick. "Short-Form Versions of the MacArthur Communicative Development Inventories." Applied Psycholinguistics, vol. 21, 2000b, pp. 95-115.

Publisher Psychometrics: Internal consistency reliability of 0.95, 0.96, and 0.96 for CDI: Words and Gestures Words Understood, CDI: Words and Gestures Words Produced, and CDI: Words and Sentences Words Produced, respectively.

Publisher Permission: Granted permission to include items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: **14 Month:** Parents were given a list of 89 words and asked if child understands each of the words (scored as 1) and if the child understands the word, does the child also say the word (scored as 2). Parents were also asked if child does any of six activities such as play peek-a-boo (scored as 1). Parents were then asked a set of 12 questions about how child uses gestures and plays (1=often, 2=sometimes, 3=not yet).

24 Month: Parents were given a list of 100 words and asked if child says each of the words. Parents were also asked if child has started to combine words yet (1=not yet, 2=sometimes, 3=often). Then parents were given 36 pairs of words and asked which word in the pair sounds most like the way the child talks.

3.A. MacArthur CDI Early Gestures (14 Mo.)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name	B1P_EGES				
Variable Label	CDI - Early Gestures (14 mo.)				
Source Variables	B1PA13A1 through B1PA13A6, B1PA14A through B1PA14L				
EHSREP Study Psychometrics	Sample size: 2,092; possible range: 0 (minimum) - 18 (maximum); actual range: 0 (minimum) - 18 (maximum)				

Variable Notes: Recode items B1PA14A through B1PA14L so that 1 stays 1; 2 becomes 1; 3 becomes 0.

B1P_EGES is the sum of the responses equal to 1 for items B1PA13A1 through B1PA13A6 and the recoded B1PA14A through B1PA14L items. Higher scores indicate that child plays more games (such as peek-a-boo, pattycake) and makes more gestures (such as pointing, waving bye-bye).

3.B. MacArthur CDI – Vocabulary Comprehension Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name	B1P_VCOM				
Variable Label	CDI - Vocabulary Comprehension (14 Mo.)				
Source Variables	B1PA_A01 though B1PA_A89				
EHSREP Study Psychometrics	Sample size: 2,179; possible range: 0 (minimum) - 89 (maximum); actual range: 0 (minimum) - 89 (maximum); mean: 48.01; standard deviation: 19.62				

Variable Notes: B1P_VCOM is the sum of the responses equal to 1 for items B1PA_A01 though B1PA_A89 (child understands the word). Higher scores indicate the child understands more words.

3.C. MacArthur CDI Vocabulary Production Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_VPRD	B2P_VPRD			
Variable Label	14m Macarthur CDI vocabulary product.	24m Macarthur CDI vocabulary product.			
Source Variables	B1PA_A01 through B1PA_A89, B1PA_B01 through B1PA_B89	B2PA13, B2PA_001 through B2PA_100			
EHSREP Study Psychometrics	Sample size: 2,101; possible range: 0 (minimum) - 89 (maximum); actual range: 0 (minimum) - 83 (maximum); mean: 12.34; standard deviation: 12.50	Sample size: 2,068; possible range: 0 (minimum) - 100 (maximum); actual range: 0 (minimum) - 100 (maximum); mean: 54.8; standard deviation: 23.0; internal consistency reliability: 0.98			

Variable Notes: 14 Months: Recode the item-level variables: if the response to B1PA_A01 through B1PA_A89 is 0, then responses to the corresponding B1PA_B01 through B1PA_B89 item should also be 0 (that is, for every 0 (does not understand) answer in part A, part B should also be coded 0).

B1P_VPRD is the sum of the responses equal to 2 for items B1PA_B01 through B1PA_B89 (in addition to understanding word, child also says word). Higher scores indicate that child can say more words.

24 Months: B2P_VPRD is the sum of the responses equal to 1 for items B2PA_001 through B2PA_100. Higher scores indicate that child can say more words.

3.D. MacArthur CDI Combining Words (24 Mo.)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2P_COMB			
Variable Label		CDI -Combining Words (24 Mo.)			
Source Variables		B2PA_2			
EHSREP Study Psychometrics		Sample size: 2,111; possible range: 0 (minimum) - 1 (maximum); actual range: 0 (minimum) - 1 (maximum)			

Variable Notes: Binary Variable to examine the percent of children combining words.

If B2PA_2 = 1 (child has not yet begun to combine words) then B2P_COMB = 0.

If B2PA_2 = 2 or 3 (child sometimes or often combines words) then B2P_COMB = 1.

If B2PA_2 is missing, then B2P_COMB is missing.

3.E. MacArthur CDI Sentence Complexity Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2P_SEN2			
Variable Label		Recoded Sentence Complexity (24 Mo.)			
Source Variables		B2PA_2, B2PA_3A through B2PA_3JJ			
EHSREP Study Psychometrics		Sample size: 1,984; possible range: 0 (minimum) - 37 (maximum); actual range: 0 (minimum) - 37 (maximum); mean: 8.18; standard deviation: 8.33; internal consistency reliability: 0.95			

Variable Notes: Children who are not combining words are assigned a score of 0 for each of the 36 scale items used to assess sentence complexity.

If B2PA_2 = 1 (child is not yet combining words), then B2P_SEN2 = 0.

For all other cases:

Recode B2PA_3A through B2PA_3JJ so that 1 becomes 0 and 2 becomes 1.

B2P_SEN2 is the sum of the responses equal to 1 for the recoded B2PA_3A though B2PA_3JJ items + 1. Higher scores indicate more advanced sentence complexity.

4. Measure Name: Parent Ratings from the Head Start Family and Child Experiences Survey (FACES)

Citation: EHSREP used the parent ratings from the Head Start Family and Child Experiences Survey (FACES): 1997 Cohort.

Zill, Nicholas, Kim Kwang, Alberto Sorongon, Randy Herbison, Xtria Cheryl Clark. "Head Start Family and Child Experiences Survey: 1997 Data User's Guide." Report submitted to the United States Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation. Washington, DC: Westat, June 2005.

FACES 1997 parent rating items were drawn from the:

Child Behavior Checklist for Preschool-Aged Children

Achenbach, T. M., Edelbrock, C., & Howell, C. T. (1987). Empirically based assessment of the behavioral/emotional problems of 2-3 year-old children. Journal of Abnormal Child Psychology, 15, 629-650.

Entwisle Scale of Personal Maturity

Entwisle, D.R., K.L. Alexander, D. Cadigan, and P.M. Pallis. "The Emergent Academic Self-Image of First Graders: Its Response to Social Structure." Child Development, vol. 58, 1987, pp. 1190–1206.

Publisher Psychometrics: Psychometrics drawn from the FACES 1997 Data User's Guide.

- Aggressive Behavior Problems
  Fall 1997: n = 2,430; Cronbach alpha = 0.62
  Spring 1998: n = 2,161; Cronbach alpha = 0.62

- Hyperactive Behavior Problems
  Fall 1997: n = 2,427; Cronbach alpha = 0.54
  Spring 1998: n = 2,159; Cronbach alpha = 0.59

- Withdrawn Behavior Problems
  Fall 1997: n = 2,417; Cronbach alpha = 0.44
  Spring 1998: n = 2,159; Cronbach alpha = 0.46

- Total Behavior Problems Index
  Fall 1997: n = 2,408; Cronbach alpha = 0.72
  Spring 1998: n = 2,142; Cronbach alpha = 0.73

- Positive Approaches to Learning
  Fall 1997: n = 2,411; Cronbach alpha = 0.57
  Spring 1998: n = 2,155; Cronbach alpha = 0.61

Publisher Permission: Individual source items not available in documentation or restricted use files.

Measure Notes: Parent ratings of children's social competence, school readiness, and behavior. Parents were asked to think about child's behavior now or in the past two months and rate if statements describe the child's usual behavior (1=not true, 2=somewhat or sometimes true, 3=very or often true).

4.A. FACES Aggression Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4FSAGGR	
Variable Label				PreK: FACES Aggression Scale	
Source Variables				B4PB01C, B4PB01J, B4PB01M, B4PB01S	
EHSREP Study Psychometrics				Sample size: 2, 044; possible range: 0 (minimum) - 8 (maximum); actual range: 0 (minimum) - 8 (maximum); mean: 2.62; internal consistency reliability: 0.63	

Variable Notes: Higher number indicates greater aggression. Score is created by multiplying the mean of the four items by four. Prior to calculating the mean, recode the items so that items coded as 1 become 2, items coded as 2 become 1, and items coded as 3 become 0.

4.B. FACES Hyperactivity Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4FSHYPR	
Variable Label				PreK: FACES Hyperactivity Scale	
Source Variables				B4PB01D, B4PB01E, B4PB01Q	
EHSREP Study Psychometrics				Sample size: 2,054; possible range: 0 (minimum) - 6 (maximum); actual range: 0 (minimum) - 6 (maximum); mean: 1.72; internal consistency reliability: 0.62	

Variable Notes: Higher number indicates greater hyperactivity. Score is created by multiplying the mean of the three items by three. Prior to calculating the mean, recode the items so that items coded as 1 become 2, items coded as 2 become 1, and items coded as 3 become 0.

4.C. FACES Social Skills and Positive Approaches to Learning Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4FSAPPR	
Variable Label				PreK: FACES Social Skills and Positive Approaches to Learning	
Source Variables				B4PB01A, B4PB01B, B4PB01F, B4PB01G, B4PB01I, B4PB01L, B4PB01N	
EHSREP Study Psychometrics				Sample size: 2,060; possible range: 0 (minimum) - 14 (maximum); actual range: 0 (minimum) - 14 (maximum); mean: 11.99; standard deviation: 1.88; internal consistency reliability: 0.64	

Variable Notes: The scale assesses children's positive social interaction skills and behavioral dispositions toward learning. Its seven items assess the degree to which children exhibit skills in making friends and accepting their ideas, enjoying learning and trying new things, showing imagination, comforting/helping others, and wanting to hear positive feedback. The social skills and positive approaches to learning scale score ranges from 0 to 14, with higher scores indicating higher levels of social skills and more positive approaches to learning.

                     Score is created by multiplying the mean of the seven items by seven. Prior to calculating the mean, recode the items so that items coded as 1 become 2, items coded as 2 become 1, and items coded as 3 become 0.

4.D. FACES Total Problem Behavior Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4FSPROB	
Variable Label				PreK: FACES Total Problem Behavior Scale	
Source Variables				B4PB01C, B4PB01D, B4PB01D, B4PB01E, B4PB01H, B4PB01J, B4PB01K, B4PB01M, B4PB01O, B4PB01P, B4PB01Q, B4PB01R, B4PB01S	
EHSREP Study Psychometrics				Sample size: 2,058; possible range: 0 (minimum) - 24 (maximum); actual range: 0 (minimum) - 22 (maximum); mean: 5.63; internal consistency reliability: 0.76	

Variable Notes: The total problem behavior score is a summary of 12 negative behaviors reported by mothers.

The scale combines 12 problem behavior items into a total problem behaviors score that represents the overall degree to which a child has problems with aggressive or disruptive behavior, hyperactivity, and withdrawn types of behavior. The total problem behaviors score ranges from 0 to 24, with higher scores representing more frequent or severe behavior problems.

Score is created by multiplying the mean of the 12 items by 12. Prior to taking the mean, recode the items so that items coded as 1 become 2, items coded as 2 become 1, and items coded as 3 become 0.

4.E. FACES Withdrawn Behavior Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4FSWITH	
Variable Label				PreK: FACES Withdrawn Behavior Scale	
Source Variables				B4PB01H, B4PB01K, B4PB01O	
EHSREP Study Psychometrics				Sample size: 2,051; possible range: 0 (minimum) - 6 (maximum); actual range: 0 (minimum) - 5 (maximum); mean: 0.74; internal consistency reliability: 0.45	

Variable Notes: Higher score indicates more withdrawn behavior. Score is created by multiplying the mean of the three items by three. Prior to taking the mean, recode the items so that items coded as 1 become 2, items coded as 2 become 1, and items coded as 3 become 0.

Parent-Report Measures, Parent (Self)

5.   Measure Name: Adaptation of the Parent-Child Conflict Tactics Scale – Parent Report

Citation: Selected items from the CTSPC copyright © 2003 by Western Psychological Services. Reprinted by Mathematica Policy Research, Inc., for sole use in specific scholarly study by permission of the publisher, WPS, 12031 Wilshire Boulevard, Los Angeles, California 90025-1251, U.S.A. All rights reserved. No additional reproduction may be made, whether in whole or in part, without the prior, written authorization of Western Psychological Services (weinberg@wpspublish.com).

Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. Child Abuse & Neglect, 22, 249-270.

Publisher Psychometrics: Alpha coefficients: Overall Physical Assault scale = 0.55, Psychological Aggression = 0.60, Nonviolent Discipline = 0.70, Neglect scale = 0.22, and Severe Physical Assault subscale = -0.02 (n = 1,000).

Publisher Permission: Cannot list items – based on copyright. Individual source items are available in documentation and restricted use files.

Measure Notes: Parents were read a list of six things they might have done when their child did something wrong, was upset or angry, or when the parent was angry. Items ranged in severity of discipline. They were asked to think about how often they did those things in the past year: 1=a few times a week, 2=a few times a month, 3=a few times a year, or 4=never in the past year.

5.A. Index: Severity of Discipline Strategies (P-Ch ConfTacticsScale)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5P_DISP
Variable Label					C5: Index: Severity of Discipline Strategies (P-Ch ConfTacticsScale)
Source Variables					B5P907A through B5P907F
EHSREP Study Psychometrics					Sample size: 1,606; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum)

Variable Notes: This composite measures the degree of harshness of discipline strategies parent used in the past year. It is based on six discipline strategies adapted from the Parent-Child Conflict Tactics Scale. Higher scores indicate more harsh discipline strategies.

If B5P907F = 1, 2, or 3, then B5P_DISP = 5;

Else if B5P907E = 1, 2, or 3, or B5P907D = 1, 2, or 3, then B5P_DISP = 4;

Else if B5P907C = 1, 2, or 3, then B5P_DISP = 3;

Else if B5P907B = 1, 2, or 3, then B5P_DISP = 2;

Else if B5P907A = 1, 2, or 3, then B5P_DISP = 1.

6. Measure Name: Center for Epidemiological Studies – Depression Scale

Citation: Radloff, Lenore S. "The CES-D Scale: A Self-Report Depression Scale for Research in the General Population." *Applied Psychological Measurement*, vol. 1, 1977, pp. 385-401.

Ross, Catherine E., John Mirowsky, and Joan Huber. "Dividing Work, Sharing Work, and In-Between: Marriage Patterns and Depression." American Sociological Review, vol. 48, 1983, pp. 809-823.

Publisher Psychometrics: Alpha = 0.85 for women in Ross et al. 1983.

Publisher Permission: No permission needed to include items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: Center for Epidemiological Studies Depression Scale - Short Form (CES-D-SF) measures symptoms of depression (Ross et al. 1983). It does not indicate a diagnosis of clinical depression, but it does discriminate between depressed patients and others. The short form scale includes 12 items taken from the full, 20-item CES-D scale (Radloff 1977). Symptoms include poor appetite, restless sleep, loneliness, sadness, and lack of energy. Respondents were asked the number of days in the past week they had a particular symptom.

The long form was administered at 14 Months; the short form was administered at 36 Months, Pre-K, and Grade 5. At 14 Months, both long and short form scores were computed.

6.A. Center for Epidemiological Studies – Depression Scale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name	B1P_CESD				
Variable Label	CES-Depression Long Form Score (14 m: total)				
Source Variables	B1PC04A through B1PC04T				
EHSREP Study Psychometrics	Sample size: 2,299; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 56 (maximum); mean: 13.37; standard deviation: 9.91; internal consistency reliability: 0.90 (White); 0.88 (African American); 0.90 (Hispanic)				

Variable Notes: Recode all items (B1PC04A through B1PC04T) so that Rarely (01) becomes 00, Some (02) becomes 01, Occasionally (03) becomes 02, and Most (04) becomes 03.

Recode the positive items (B1PC04D, B1PC04H, B1PC04L, B1PC04P) so that Most (03) becomes 00, Occasionally (02) becomes 01, Some (01) becomes 02, and Rarely (00) becomes 03.

B1P_CESD total score is the sum of all items B1PC04A through B1PC04T (potential range is 0 to 60, actual range is 0 to 56). Higher scores indicate higher levels of depressive symptoms.

6.B. CES-D Depression Scale - Short Form Total Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X		X	X	X
Variable Name	B1P_CDSF		B3P_CDSF	B4PCESD	B5P_CESD
Variable Label	14m: CES-Depress Short Form (FM) Scale		36m: CES-Depress Short Form (FM) Scale	PreK: Parent Depressive Symptoms (CES-D)	C5: CES-D Depression Scale Total Score
Source Variables	B1PC04A, B1PC04B, B1PC04C, B1PC04E, B1PC04F, B1PC04G, B1PC04J, B1PC04K, B1PC04M, B1PC04N, B1PC04R, B1PC04T		B3PC04A, B3PC04B, B3PC04C, B3PC04E, B3PC04F, B3PC04G, B3PC04J, B3PC04K, B3PC04M, B3PC04N, B3PC04R, B3PC04T	B4PCO4A, B4PCO4B, B4PCO4C, B4PCO4E, B4PCO4F, B4PCO4G, B4PCO4J, B4PCO4K, B4PCO4M, B4PCO4N, B4PCO4R, B4PCO4T	B5PCO4A, B5PCO4B, B5PCO4C, B5PCO4E, B5PCO4F, B5PCO4G, B5PCO4J, B5PCO4K, B5PCO4M, B5PCO4N, B5PCO4R, B5PCO4T
EHSREP Study Psychometrics	Sample size: 2,299; possible range: 0 (minimum) - 36 (maximum); actual range: 0 (minimum) - 36 (maximum); mean: 7.64; standard deviation: 6.81		Sample size: 2,095; possible range: 0 (minimum) - 36 (maximum); actual range: 0 (minimum) - 36 (maximum); mean: 7.72; standard deviation: 7.00; internal consistency reliability: 0.88	Sample size: 2,050; possible range: 0 (minimum) - 36 (maximum); actual range: 0 (minimum) - 36 (maximum); mean: 8.05; standard deviation: 7.15; internal consistency reliability: 0.88	Sample size: 1,620; possible range: 0 (minimum) - 36 (maximum); actual range: 0 (minimum) - 36 (maximum); mean: 7.28; standard deviation: 6.66; internal consistency reliability: 0.87 (all); 0.88 (White); 0.84 (African American); 0.89 (Hispanic)

Variable Notes:　Recode all items (BnPCO4A through BnPCO4T) so that Rarely (01) becomes 00, Some (02) becomes 01, Occasionally (03) becomes 02, and Most (04) becomes 03.

BnP_CDSF, B4PCESD, or B5P_CESD is the sum of the 12 items (potential range: 0 to 36). Higher scores indicate greater number/frequency of depressive symptoms.

7.   Measure Name: Composite International Diagnostic Inventories – Short Form

Citation: Nelson, Christopher B., Ronald C. Kessler, and Daniel Mroczek. "Scoring the World Health Organization's Composite International Diagnostic Interview Short Form (CIDI-SF; v1.0 NOV98)."

Kessler, R.C., G. Andrews, L.J. Colpe, E. Hiripi, D.K. Mroczek, S.L.T. Normand, E.E. Walters, and A.M. Zaslavsky. "Short Screening Scales to Monitor Population Prevalences and Trends in Nonspecific Psychological Distress." *Psychological Medicine*, vol. 32, no. 6, 2002, pp. 959-976.

Walters, Ellen E., Ronald C. Kessler, Christopher B. Nelson, and Daniel Mroczek "{Scoring the WHO's Composite International Diagnostic Interview Short Form (CIDI-SF; v1.1 Dec2002)."

Publisher Psychometrics:

Publisher Permission: Granted permission to include items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: The CIDI-SF is a series of depression symptoms questions asked if the respondent indicates he/she has felt sad, blue, or depressed for two or more weeks in a row in the past year. At 24 Months, parents were asked questions from Major Depression, Generalized Anxiety Disorder, Alcohol Dependence, and Drug Dependence scales, but only the Depression subscale was created and included on the data file.

Note, the CIDI-SF is no longer recommended for use. See letter from Ron Kessler dated August 17, 2007: http://www.hcp.med.harvard.edu/wmhcidi/ftpdir_public/CIDI-SF%20memo.pdf

7.A. CIDI Probability (Upper Bound), CIDI Depression Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2P_CD2P			
Variable Label		24m CIDI Probability (Upper Bound)			
Source Variables		B2PCO21, B2PCO2A, B2PCO2B, B2PC12 B2PC12A, B2PC12B B2PC14A, B2PC15A B2PC13, B2PC16 through B2PC18			
EHSREP Study Psychometrics		Sample size: 2,154; possible range: 0 (minimum) - 90.83 (maximum); actual range: 0 (minimum) - 90.83 (maximum); mean: 12.5; standard deviation: 29.8			

Variable Notes: A skip logic error in the version of the CIDI that we used prevented scoring the CIDI in the usual way. Based on the advice of the CIDI developer, two versions of the CIDI scores were created: a lower (B2P_CD3P) and an upper bound score (the true CIDI score is between these two scores). The lower and upper bound scores tend to be 1 to 4 percentage points apart for the full sample and most subgroups. The lower bound version of the measure is the most conservative estimate of the probability of depression.

8.   Measure Name: Knowledge of Infant Development Inventory (KIDI)

Citation: MacPhee, David, Colorado State University, the Department of Human Development and Family Studies. "Manual: Knowledge of Infant Development." Unpublished manuscript. University of North Carolina, 1983.

The author of the KIDI requests that you contact him if you plan to use this measure in your own research or evaluation. (David MacPhee, Colorado State University, the Department of Human Development and Family Studies.)

Publisher Psychometrics:

Publisher Permission: Permission to include construct-level data in the public use file. Individual source items are not available in documentation but are available in restricted use files.

Measure Notes: The KIDI includes 75 items designed to measure parents' knowledge of child development. EHSREP used the subset of KIDI items that were used by the Infant Health and Development Program (IHDP) study at each age point.

At 14 Months, EHSREP used 14 KIDI items: 18, 20, 23, 56, 42, 44, 45, 47, 50, 58, 61, 64, 54, and 66. (At 12 Months, IHDP had included 6 additional KIDI items 31, 41, 52, 59, 69, and 70.)

At 24 Months, EHSREP used 8 KIDI items 26, 28, 35, 45, 47, 51, 55, and 56. (At 24 Months, IHDP had included 10 additional KIDI items 17, 23, 33, 39, 52, 58, 64, 65, 66, and 72.)

KIDI items 1 through48 had response categories of Agree/Disagree/Not Sure, and for credit the respondent had to agree with the correct items and disagree with the incorrect items. IHDP coding was similar. In EHSREP, respondents were instead asked for their level of agreement or disagreement with each statement (1=strongly agree, 2=mildly agree, 3=not sure, 4=mildly disagree, 5=strongly disagree).

KIDI items 49 through 68 (on milestones) had response categories of Agree/Younger/Older/Not Sure, and for credit on incorrect items the respondent had to accurately say whether the milestone occurs at a younger or older age than found in the statement. These items were scored similarly in the 24 Month IHDP, but when administered in the 14 Month IHDP and at the 14 and 24 Months of EHSREP, respondents were simply asked whether they agreed or disagreed with the statements. Response categories followed the same approach as for the earlier KIDI items (IHDP coded as Agree/Disagree/Not Sure and EHSREP used 1=strongly agree, 2=mildly agree, 3=not sure, 4=mildly disagree, 5=strongly disagree).

8.A. Knowledge of Infant Development Inventory (4 point scale)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_KDC2	B2P_KDC2			
Variable Label	14m Knowledge infant develop. 4 pt scale	24m Knowledge infant develop. 4 pt scale			
Source Variables	B1P101A through B1P101N (14 items)	B2P101A through B2P101H (8 items)			
EHSREP Study Psychometrics	Sample size: 2,325; possible range: 1 (minimum) - 4 (maximum); actual range: 1.71 (minimum) - 4.0 (maximum); mean: 3.05; standard deviation: 0.41; internal consistency reliability: 0.62 (White), 0.44 (African American), 0.56 (Hispanic)	Sample size: 2,139; possible range: 1 (minimum) - 4 (maximum); actual range: 1.75 (minimum) - 4.0 (maximum); mean: 3.37; standard deviation: 0.42; internal consistency reliability: 0.62 (White), 0.44 (African American), 0.56 (Hispanic)			

Variable Notes: For computing aggregate scores, EHSREP responses were recoded to a 4-point scale, so that stronger agreement with "the truth" was scored higher, values of "1" or "2" actually represent incorrect responses, and "not sure" ("3") responses were excluded from the recoding. EHSREP aggregate scores, BnP_KDC2, are the mean of the available (excluding "not sure") items based on the 4-point scale, with a possible range from 1 to 4.

9.   Measure Name: Parental Modernity Scale

Citation: Schaefer, Earl S., and Marianna Edgerton. "Parent and Child Correlates of Parental Modernity." In Parental Belief Systems: The Psychological Consequences for Children, edited by I.E. Sigel. Hillsdale, NJ: Erlbaum, 1985.

Publisher Psychometrics:

Publisher Permission: Permission to include constructed variables only. Individual source items are not available in documentation or restricted use files.

Measure Notes: Parents were asked to rate a series of questions based on their assumption of how parents and children should act (strongly agree, mildly agree, not sure, mildly disagree, or disagree).

9.A. Parent Modernity Progressive Scale (24M) - Progressive Attitudes

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2P_PRO			
Variable Label		Parent Modernity Progressive Scale (24M)			
Source Variables		B2P1_2A, B2P1_2G through B2P1_2J			
EHSREP Study Psychometrics		Sample size: 2,129; possible range: 5 (minimum) - 25 (maximum); actual range: 5 (minimum) - 25 (maximum); mean: 20.91; standard deviation: 3.43; internal consistency reliability: 0.68			

Variable Notes: A higher score indicates more modern (progressive) parent beliefs about childrearing and education.

Reverse code all items B2P1_2A, B2P1_2G through B2P1_2J (5-point scale). If one item is missing then impute mean of other scores for that score. For all cases with less than one item missing, B2P_PRO is the sum of the five progressive items. B2P_PRO is set equal to missing if more than one item is missing.

9.B. Parent Modernity Traditional Scale (24 Months), Traditional Attitudes

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2P_TRAD			
Variable Label		Parent Modernity Traditional scale (24M)			
Source Variables		B2P1_2B through B2P1_2F			
EHSREP Study Psychometrics		Sample size: 2,127; possible range: 5 (minimum) - 25 (maximum); actual range: 5 (minimum) - 25 (maximum); mean: 18.68; standard deviation: 4.17; internal consistency reliability: 0.73			

Variable Notes: A higher score indicates more conservative or strict (traditional) parent beliefs about childrearing and education.

                Reverse code all items B2P1_2B through B2P1_2F (5-point scale). If one item is missing then impute mean of other scores for that score. For all cases with less than one item missing, B2P_TRAD is the sum of the five traditional items. B2P_TRAD is set equal to missing if more than one item is missing.

10. Measure Name: Parenting Stress Index – Short Form

Citation: "Adapted and reproduced by special permission of the Publisher, Psychological Assessment Resources, Inc., Odessa, FL 33556, from the Parenting Stress Index by Richard R. Abidin, Ed.D., Copyright 1990 by PAR, Inc. Further reproduction is prohibited without permission from PAR, Inc."

Abidin, R. R. (1995). Parenting Stress Index: Professional Manual (3rd ed.). Odessa, FL: Psychological Assessment Resources, Inc.

Whiteside-Mansell, L., Ayoub, C., McKelvey, L., Faldowski, R. A., Hart, A., & Shears, J. (2005). Parenting Stress of Low-Income Parents of Toddlers and Preschoolers: Psychometric Properties of a Short Form of the Parenting Stress Index. Manuscript submitted for publication.

Publisher Psychometrics: Grade 5: Subscales from the 14, 24, and 36 Month EHSREP waves were factor-analyzed by Whiteside-Mansell et al., 2005. Selected one of two factors from Parental Distress ("Parenting Demands Stress") and one of three factors from Parent-Child Dysfunctional Interaction ("Dyadic Interaction"). Item loadings range = 0.48-0.80 for Parenting Demands Stress and 0.48-0.86 for Dyadic Interaction.

Publisher Permission: Permission to include constructed variables in public use data file. For all waves, cannot reproduce items in documentation, however, in Grade 5, received permission to include PSI-SF item numbers in documentation (a crosswalk is provided in the Grade 5 parent interview). Individual source items are available in restricted use files.

Measure Notes: In the 14, 24, and 36 Month waves, the Parenting Stress Index - Short Form (PSI-SF) was used. It measures the degree of stress in parent-child relationships stemming from three possible sources: the child's challenging temperament, parental depression, and negatively reinforcing parent-child interactions (Abidin 1995). The 24-item PSI-SF is in the restricted EHSREP data files as variables BnP103a through BnP103w plus BnP104. For the first 23 items, the interviewer said: "For each statement, please tell me if you strongly agree with it, mildly agree, mildly disagree, or strongly disagree." ("Not sure" was not offered as a choice.) Responses were coded on a 5-point scale initially as 1=Strongly Agree, 2=Agree, 3=Don't Know, 4=Disagree, 5=Strongly Disagree. They were recoded to 5=Strongly Agree, 4=Agree, 3=Don't Know, 2=Disagree, 1=Strongly Disagree. Item 24 was coded on a scale from 1 to 5, with 1 as the most negative response and 5 as the most positive response. The wording of PSI-SF items 7, 10, 11, 14, 17, 18, 19, 20, and 24 were modified for the EHSREP version. The recoded items (except for item 24) were then summed for the different scale scores.

In Grade 5, items were selected by Whiteside-Mansell from the EHSREP 14, 24, and 36 month Parent Questionnaires and the Shortened Parental Distress and Parent-Child Dysfunctional Interaction Subscales from the PSI-Short Form (Abidin 1995). Eleven items were selected: B5P103B (PSI-SF item 2), B5P103C (PSI-SF item 3), B5P103D (PSI-SF item 4), B5P103E (PSI-SF item 5), B5P103G (PSI-SF item 7 with wording modified), B5P103M (PSI-SF item 13), B5P103N (PSI-SF item 14 with wording modified), B5P103O (PSI-SF item 15), B5P103P (PSI-SF item 16), B5P103V (PSI-SF item 22), B5P103W (PSI-SF item 23).

10.A. Parental Distress Scale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		X
Variable Name	B1P_PD	B2P_PD	B3P_PD		B5P_PSI
Variable Label	14m Parental Distress Scale	24m Parental Distress Scale	36m Parental Distress Scale		C5: PSI Subscale (short form)
Source Variables	B1P103A through B1P103L	B2P103A through B2P103L	B3P103A through B3P103L		B5P103B, B5P103C, B5P103D, B5P103E, B5P103G
EHSREP Study Psychometrics	Sample size: 2,332; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 59 (maximum); mean: 27.29; standard deviation: 9.45	Sample size: 2,129; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 60 (maximum); mean: 25.4; standard deviation: 9.3; internal consistency reliability: 0.82	Sample size: 2,053; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 58 (maximum); mean: 25.19; standard deviation: 9.59; internal consistency reliability: 0.84		Sample size: 1,621; possible range: 5 (minimum) - 25 (maximum); actual range: 5 (minimum) - 25 (maximum); mean: 8.37; standard deviation: 3.92. internal consistency reliability: 0.73 (all); 0.74 (White); 0.72 (African American); 0.73 (Hispanic)

Variable Notes: Parental Distress measures the level of distress the parent is feeling in his or her role as a parent stemming from personal factors, including a low sense of competence as a parent, stress because of perceived restrictions stemming from parenting, depression, and lack of social support. Item responses are coded on a 5-point scale, with 5 indicating high levels of parental distress.

14, 24, and 36 Months: Scores on the 12-item Parent Distress Scale can range from 12 to 60.

BnP_PD is the sum of the non-missing responses for items, BnP103A through BnP103L. If an item is missing, its value is imputed from the mean of the non-missing items.

Grade 5: Scores on the 5-item Parent Distress Scale can range from 5 to 25.

B5P_PSI is the sum of the non-missing responses for the following items: B5P103B, B5P103C, B5P103D, B5P103E, B5P103G. If one item is missing, its value is imputed from the mean of the non-missing items. If more than one item is missing, B5P_PSI is set to missing.

10.B. Parent-Child Dysfunctional Interaction

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		X
Variable Name	B1P_PCDI	B2P_PCDI	B3P_PCDI		B5P_PCDI
Variable Label	14m Parent-Child Dysfunc Interaction	24m Parent-Child Dysfunc Interaction	36m Parent-Child Dysfunc Interaction		C5: Parchild dysfunctl interaction PSI subscale (short form)
Source Variables	B1P103M through B1P103W, B1P104	B2P103M through B2P103W, B2P104	B3P103M through B3P103W, B3P104		B5P103M, B5P103N, B5P103O, B5P103P, B5P103V, B5P103W
EHSREP Study Psychometrics	Sample size: 2,324; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 54 (maximum); mean: 17.54; standard deviation: 5.90	Sample size: 2,128; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 56.73 (maximum); mean: 17.23; standard deviation: 5.87; internal consistency reliability: 0.78	Sample size: 2,022; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 56 (maximum); mean: 17.76; standard deviation: 6.28; internal consistency reliability: 0.81		Sample size: 1,621; possible range: 6 (minimum) - 30 (maximum); actual range: 6 (minimum) - 29 (maximum); mean: 9.72; standard deviation: 4.59. internal consistency reliability: 0.77 (all); 0.78 (White); 0.76 (African American); 0.76 (Hispanic)

Variable Notes: Parent-Child Dysfunctional Interaction measures the parent's perception that their child does not meet the parent's expectations and interactions in reinforcing the parent. The parent may perceive that the child is abusing or rejecting the parent or that the parent feels disappointed in or is alienated from the child. Item responses are coded on a 5-point scale, with 5 indicating high levels of parent-child dysfunctional interaction.

14, 24, and 36 Months: Scores on the 12-item Parent-Child Dysfunctional Interaction Scale can range from 12 to 60.

BnP_PCDI as the sum of the non-missing responses to BnP103M through BnP103W and BnP104. If an item is missing, its value is imputed from the mean of the non-missing items.

Grade 5: Scores on the 6-item Parent-Child Dysfunctional Interaction Scale can range from 6 to 30. The scale score is calculated by summing the non-missing values for the following variables: B5P103M B5P103N B5P103O B5P103P B5P103V B5P103W. If only one of the items is missing, its value is imputed from the mean of the non-missing items. If more than one item is missing, BNP_PCDI is set to missing.

11. Measure Name: Pearlin Mastery Scale

Citation: Pearlin, L.I. and Schooler, C. "The Structure of Coping." Journal of Health and Social Behavior, vol. 22 (1978), pp. 337-356.

Publisher Psychometrics: Item loadings for factor items measuring psychological coping resources for the seven items in the scale are: 0.76, 0.71, 0.70, 0.65, 0.56, -0.47, and -0.47.

Publisher Permission: Granted permission to include items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: The Pearlin Mastery Scale measures an individual's level of mastery, or the extent to which an individual thinks of his/her life-chances as being under his/her own control rather than ruled by fate (Pearlin & Schooler, 1978). Seven items (five negatively worded and two positively worded) compose the scale and are rated by respondents as 1=strongly agree, 2=somewhat agree, 3=somewhat disagree, and 4=strongly disagree.

11.A. Pearlin Mastery Total Score (5 Item Sum)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name	B1P_MAS5				
Variable Label	14m Pearlin Mastery Total Score				
Source Variables	B1PC01A, B1PC01B, B1PC01C, B1PC01E, B1PC01G				
EHSREP Study Psychometrics	Sample size: 2,309; possible range: 5 (minimum) - 20 (maximum); actual range: 5 (minimum) - 20 (maximum); mean: 15.42; standard deviation: 3.45				

Variable Notes: B1P_MAS5 total score is the sum of B1PC01A, B1PC01B, B1PC01C, B1PC01E, and B1PC01G (positively worded items not included). Higher scores indicate greater mastery.

12. Measure Name: Woodcock-Johnson Tests of Achievement – Revised (WJ-R)

Citation: Picture Vocabulary Test: Woodcock, R.W. and A.F. Munoz-Sandoval. *Woodcock-Munoz Language Survey Normative Update. Picture Vocabulary Test English and Spanish Forms.* Itasca, IL: Riverside Publishing, 2001.

Publisher Psychometrics:

Publisher Permission: Permission to include items in data file by item number only along with scale scores. Individual source items are not available in documentation, but are available in restricted use files.

Measure Notes: At the 24 Month wave, parents were administered the WJ-R picture vocabulary subscale to assess parent's object recognition, lexical access, and lexical retrieval.

12.A. Parent Woodcock-Johnson Picture Vocabulary Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2PWJSS			
Variable Label		24m WJ Pic Vocab Stand Score			
Source Variables		B2P7B01 through B2P7B58			
EHSREP Study Psychometrics		Sample size: 1,685; possible range: 0 (minimum) - 200 (maximum); actual range: 50 (minimum) - 130 (maximum); mean: 88.99; standard deviation: 11.43			

Variable Notes: Parents were administered the Woodcock-Johnson Picture Vocabulary Test by trained field staff during visit to parent's home. The tests were scored using the 2001 Woodcock-Munoz Normative Update Scoring Program (with adaptations). Raw scores of Woodcock Johnson vocabulary test were standardized to a normal distribution with mean of 100 and standard deviation of 15. There were English and Spanish versions of the test with separate norms, but they were equated and a single score was created.

Parent-Report Measures, Family/Home

13. Measure Name: Family Environment Scale (FES)

Citation: Reproduced by special permission of the Publisher, Mind Garden, Inc., www.mindgarden.com from the Family Environment Scale by Rudolf H. Moos and Bernice S. Moos. Copyright 1974, 1994, and 2002 by Rudolf Moos. All rights reserved. Further reproduction is prohibited without the Publisher's written consent.

Moos, R. H. (1974). Family Environment Scale – Form R. Palo Alto, CA: Consulting Psychologists Press.

Publisher Psychometrics: Cohesion Subscale items selected using exploratory factor analysis with IHDP Age 8 data (excluding mothers with a college degree); Internal consistency reliability = 0.78 (Whiteside-Mansell, 2005)

Publisher Permission: Granted permission to include items in data file and documentation for 14, 24, and 36 Months. Individual source items are available in documentation and restricted use files for 14, 24, and 36 Months. Individual source items are not available in documentation or restricted use files for Grade 5.

Measure Notes: The FES measures the social environments of families along 10 key dimensions, including family relationships (cohesion, expressiveness, and conflict); emphases within the family on aspects of personal development that can be supported by families (for example, achievement orientation; independence); and maintenance of the family system (organization and control) (Moos and Moos 1976). EHSREP measured one dimension, conflict.

13.A. Family Environment Scale (FES) Conflict

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		X
Variable Name	B1P_CONF	B2P_CONF	B3P_CONF		B5P_CONF
Variable Label	14m FES Conflict	24m FES Conflict	36m FES Conflict		C5: Family Environment conflict scale
Source Variables	B1P69A through B1P69E	B2P35A through B2P35E	B3P35A through B3P35E		B5P69A through B5P69H
EHSREP Study Psychometrics	Sample size: 1,941; possible range: 1 (minimum) - 4 (maximum); range: 1 (minimum) - 4 (maximum); mean: 1.72; standard deviation: 0.54	Sample size: 1,855; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 1.71; standard deviation: 0.54; internal consistency reliability: 0.67	Sample size: 1,829; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 1.67; standard deviation: 0.53; internal consistency reliability: 0.68		Sample size: 1,622; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 3.63 (maximum); mean: 1.43; standard deviation: 0.44. internal consistency reliability: 0.78 (all); 0.79 (White); 0.78 (African American); 0.76 (Hispanic)

Variable Notes: Family Conflict measures the extent to which the open expression of anger and aggression and generally conflictual interactions are characteristic of the family.

14, 24, and 36 Months: Parents respond to five items on a 4-point scale, where 4 indicates higher levels of agreement with statements such as, "we fight a lot", and "we hardly ever lose our tempers."

Codes were reversed on the second item (B1P69B/BnP35B) so that a 4 indicates high levels of conflict for all items.

The scale score is the mean of all five items.

Any case with a missing item is set to missing for the scale score.

Grade 5: Parents respond to eight items on a 4-point scale where 4 indicates higher levels of disagreement. The score is the mean of items B5P69A through B5P69H. If more than one item is missing, then B5P_CONF is set to missing. If one item is missing, the score is the mean of non-missing items.

14. Measure Name: Family Resource Scale (FRS)

Citation: Dunst, Carl J., Carol M. Trivette, and Angela G. Deal. Enabling and Empowering Families: Principles and Guidelines for Practice, Cambridge, MA: Brookline Books, 1988.

Publisher Psychometrics: Mean correlation (rankings by 28 professionals against the order on the scale) r = 0.81; test-retest reliability mean correlation (rankings by 23 professionals) r = 0.70; alpha coefficient = 0.92 (rankings by 45 mothers of preschool retarded, handicapped, and developmentally at-risk children participating in an early intervention program); split-half reliability = 0.92; stability coefficient for total scale scores r = 0.52.

Publisher Permission: Not applicable. Individual source items are available in documentation and restricted use files.

Measure Notes: The FRS was asked in the 6, 15, and 26 Month Parent Services Follow-Up Interviews (PSI). The FRS measures the adequacy of a family's resources (for example, food, shelter, transportation). It uses a 5-point scale ranging from not at all adequate (1) to almost always adequate (5).

14.A. Family Resource Scale – Dunst-Like Total Scale (39 Items)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	P0NDINT (6m PSI)	P1NDINT (15m PSI)	P2NDINT (26m PSI)		
Variable Label	PSI 6: DUNST-LIKE TOTAL SCALE	PSI 15: DUNST-LIKE TOTAL SCALE	PSI 26: DUNST-LIKE TOTAL SCALE		
Source Variables	P0C1 through P0C32, P0C33 through P0C39	P1C1 through P1C32, P1C33 through P1C39	P2C1 through P2C32, P2C33 through P2C39		
EHSREP Study Psychometrics	Sample size: 1,851; possible range: 39 (minimum) - 195 (maximum); actual range: 60 (minimum) - 192 (maximum); mean: 149.03; standard deviation: 20.69	Sample size: 1,818; possible range: 39 (minimum) - 195 (maximum); actual range: 68.3 (minimum) - 195 (maximum); mean: 152.22; standard deviation: 19.34; internal consistency reliability: 0.91	Sample size: 2,073; possible range: 39 (minimum) - 195 (maximum); actual range: 79 (minimum) - 195 (maximum); mean: 154.04; standard deviation: 18.92; internal consistency reliability: 0.92		

Variable Notes: PnNDINT is largest integer lower than PnNDINDX. Count number of missing values in PnC1 through PnC39.

Calculate PnNDINDX as sum of PnC1 through PnC39, with missing values imputed. If 25 percent or fewer items are missing, set missing items equal to mean of non-missing items. If more than 25 percent of items are missing, set PnNDINDX to missing.

15. Measure Name: Home Observation for Measurement of the Environment (HOME) – Infant/Toddler

Citation: Caldwell, Bettye M., and Robert H. Bradley. Administration Manual: Home Observation for Measurement of the Environment. Little Rock, AR: University of Arkansas at Little Rock, 1984, 2003.

Publisher Psychometrics:

Publisher Permission: Granted permission to include items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: Home Observation for Measurement of the Environment (HOME) measures the quality of stimulation and support available to a child in the home environment (Bradley and Caldwell 1984). Information needed to score the inventory is obtained through a combination of interview and observation conducted in the home with the child's parent while the child is present.

15.A. HOME: Total Score (with additional NLSY items)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_HOME	B2P_HOME			
Variable Label	14m Total HOME Score	24m Total HOME Score			
Source Variables	B1PF01 through B1PF14, B1PA12, B1P803R, B1PA01BR, B1PA01AR, B1PA01HR, B1PF16, B1PA01ER, B1PA02AR, B1PA01DR, B1PA01GR, B1PA11R, B1PA07R, B1PA06R, B1PA04R, B1PA05R, B1P707FR, B1PA01FR	B2PF01 through B2PF14, B2PA12, B2P803R, B2PA01BR, B2PA01AR, B2PA01HR, B2PF16, B2PA01ER, B2PA02AR, B2PA01DR, B2PA01GR, B2PA11R, B2PA07R, B2PA06R, B2PA04R, B2PA05R, B2P707FR, B2PA01FR.			
EHSREP Study Psychometrics	Sample size: 2,114; possible range: 0 (minimum) - 31 (maximum); actual range: 6.46 (minimum) - 31 (maximum)	Sample size: 1,949; possible range: 0 (minimum) - 31 (maximum); actual range: 8.27 (minimum) - 31 (maximum); mean: 26.36; standard deviation: 3.50; internal consistency reliability: 0.76			

Variable Notes: HOME Total Score measures the cognitive stimulation and emotional support provided by the parent in the home environment. The total includes all of the 31 HOME items included in EHSREP out of the original 45 HOME items.

BnP_HOME is the sum of responses to items BnPF01 through BnPF14, BnPA12, BnP803R, BnPA01BR, BnPA01AR, BnPA01HR, BnPF16, BnPA01ER, BnPA02AR, BnPA01DR, BnPA01GR, BnPA11R, BnPA07R, BnPA06R, BnPA04R, BnPA05R, BnP707FR, BnPA01FR. (If an item was not an observation item, it was recoded to 1=Yes, 0=No.)

Twenty-seven out of the 31 items are detailed in the HOME variables created below. The remaining 4 variables include:

BnPA07. What does parent do when child is trying to feed/dress himself and isn't able to

BnPA06. What does parent do when someone gives child a toy that is for a slightly older child

BnPA04. What does parent do when child gets bored and isn't sure what to do

BnPA05. Does parent think it's a good idea to have toys around that are a little advanced for child

Scores can range from 0 to 31 with higher scores indicating higher quality stimulation and support available to a child in the home environment.

If 25 percent or more of the items are missing, BnP_HOME is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

15.B. HOME: Verbal/Social Skills Scale (Parental Verbal Skills)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_VSOC	B2P_VSOC			
Variable Label	14m HOME: Verbal/ Social Skill	24m HOME: Verbal/ Social Skills			
Source Variables	B1PF04, B1PF05, B1PF06	B2PF04, B2PF05, B2PF06			
EHSREP Study Psychometrics	Sample size: 2,149; possible range: 0 (minimum) - 3 (maximum); actual range: 0 (minimum) - 3 (maximum)	Sample size: 1,996; possible range: 0 (minimum) - 3 (maximum); actual range: 0 (minimum) - 3 (maximum); mean: 2.8; standard deviation: 0.6; internal consistency reliability: 0.71			

Variable Notes: BnP_VSOC includes three observation items scored as 1=yes or 0=no: Parent's speech is distinct and audible; Parent initiates verbal exchange with visitor; and Parent converses freely and easily.

BnP_VSOC is the sum of the three items. Scores can range from 0 to 3 with higher scores representing better parental verbal skills. If 25 percent or more of the items are missing, BnP_VOC is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

15.C. HOME: Emotional Responsivity (Parental Warmth)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_EMO	B2P_EMO			
Variable Label	14m HOME: Emotional Response	24m HOME: Emotional Response			
Source Variables	B1PF01 through B1PF03, B1PF07 through B1PF09, B1PA12	B2PF01 through B2PF03, B2PF07 through B2PF09, B2PA12			
EHSREP Study Psychometrics	Sample size: 2,111; possible range: 0 (minimum) - 7 (maximum); actual range: 0 (minimum) - 7 (maximum); mean: 5.99; standard deviation: 1.47	Sample size: 1,949; possible range: 0 (minimum) - 7 (maximum); actual range: 0 (minimum) - 7 (maximum); mean: 6.14; standard deviation: 1.36; internal consistency reliability: 0.74			

Variable Notes: BnP_EMO includes seven observation items scored as 1=yes or 0=no: Parent spontaneously vocalized to child twice; Parent responds verbally to child's verbalizations; Parent tells child name of object or person during visit; Parent spontaneously praises child at least twice; Parent's voice conveys positive feelings toward child; Parent caresses or kisses child at least once; Parent does not shout at child; Parent responds positively to praise of child offered by visitor.

BnP_EMO is the sum of the seven items. Scores can range from 0 to 7 with higher scores representing greater parental warmth. If 25 percent or more of the items are missing, BnP_EMO is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

15.D. HOME: Nonpunitive (Parental Lack of Hostility) Scale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_NPUN	B2P_NPUN			
Variable Label	14m HOME: Nonpunitive Scale	24m HOME: Nonpunitive Scale			
Source Variables	B1PF10, B1PF11, B1PF12, B1PF13, B1PF14	B2PF10, B2PF11, B2PF12, B2PF13, B2PF14			
EHSREP Study Psychometrics	Sample size: 2,115; possible range: 0 (minimum) - 5 (maximum); actual range: 0 (minimum) - 5 (maximum)	Sample size: 1,945; possible range: 0 (minimum) - 5 (maximum); actual range: 0 (minimum) - 5 (maximum); mean: 4.4; standard deviation: 1.2; internal consistency reliability: 0.71			

Variable Notes: BnP_NPUN includes five observation items scored as 1=yes or 0=no: Parent does not shout at child; Parent does not express annoyance with or hostility to child; Parent neither slaps nor spanks child during visit; Parent does not scold or criticize child during visit; Parent does not interfere or restrict child more than three times.

                        BnP_NPUN is the sum of the five items. Scores can range from 0 to 5 with higher scores indicating lack of parental hostility. If 25 percent or more of the items are missing, BnP_NPUN is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

15.E. HOME: Support of Cognitive, Language, and Literacy Environment (Stimulation)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	B1P_Hlan	B2P_Hlan			
Variable Label	14m HOME: Lang & Cog Stim	24m HOME: Lang & Cog Stim			
Source Variables	BnP803R, BnPA01BR, BnPAO1AR, BnPA01HR, BnPF16, BnPA01ER, BnPA02R, BnPA01DR, BnPAO1GR, BnPA11R, BnP707FR, BnPA01FR	B2P803R, B2PA01BR, B2PAO1AR B2PA01HR, B2PF16, B2PA01ER, B2PA02R, B2PA01DR, B2PAO1GR, B2PA11R, B2P707FR, B2PA01FR			
EHSREP Study Psychometrics	Sample size: 2,319; possible range: 0 (minimum) - 12 (maximum); actual range: 1 (minimum) - 12 (maximum); mean: 9.79; standard deviation: 1.88	Sample size: 2,146; possible range: 0 (minimum) - 12 (maximum); actual range: 0 (minimum) - 12 (maximum); mean: 10.21; standard deviation: 1.71; internal consistency reliability: 0.68			

Variable Notes: BnP_HLan includes 12 observation items scored as 1=yes or 0=no: At least 10 books are present and visible; Muscle activity toys or equipment available; Push or pull toy available; Stroller or walker, kiddie car, scooter, or tricycle available; Parent provides toys for child during visit (interviewer observation); Learning equipment appropriate to age (such as cuddly toys or role-playing toys); Learning facilitators (such as child-sized table, chair, or booster chair); Complex eye-hand coordination toys (permitting combination) (such as stacking or nesting toys, Legos, blocks); Toys for literature and music (such as rattles, musical toys); Parent talks to child while doing household work; Parent reads stories to child at least two times weekly; Child has three or more books of his/her own.

BnP_HLan is the sum of the 12 items. Scores can range from 0 to 12 with higher scores indicating greater parent support of child cognitive, language, and literacy stimulation. If 25 percent or more of the items are missing, BnP_HLan is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

16. Measure Name: Home Observation for Measurement of the Environment (HOME) – Preschool Age

Citation: Caldwell, Bettye M., and Robert H. Bradley. Administration Manual: Home Observation for Measurement of the Environment. Little Rock, AR: University of Arkansas at Little Rock, 1984, 2003.

Homelife Interview Observational Subscales: Leventhal, Tama, Mary Beth Selner-O'Hagan, Jeanne Brooks-Gunn, Jeffrey B. Bingenheimer, and Felton J. Earls. "The Homelife Interview from the Project on Human Development in Chicago Neighborhoods: Assessment of Parenting and Home Environment for 3- to 15-Year-Olds." Parenting, vol. 4, no. 2-3, 2004.

Based off of Bradley, R. H., Corwyn, R. F., Caldwell, B. M., Whiteside-Mansell, L., Wasserman, G. A., & Mink, I. T. (2000). Measuring the home environments of children in early adolescence. Journal of Research on Adolescence, 10, 247-288.

Publisher Psychometrics: Leventhal et al., 2004: Random sample of 2,685 households (17% EA, 34% AA, 45% Latino) from 80 Chicago neighborhoods (children aged 3-15). Subscale alpha range: 0.67-0.85. All subscales significantly correlated with WISC-R Vocabulary and/or behavior problems for 9-year-olds (n = 473-484).

Publisher Permission: Granted permission to include items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: Home Observation for Measurement of the Environment (HOME) measures the quality of stimulation and support available to a child in the home environment (Bradley and Caldwell 1984). The 36 Month and Pre-K assessments, used the HOME-Short Form Inventory, Preschool version that was used in the National Longitudinal Survey of Youth (NLSY). Information needed to score the inventory is obtained through a combination of interview and observation conducted in the home with the child's parent while the child is present. A total of 37 items were used for the 36 Month HOME scale in the EHSREP. A total of 39 items were used for the Pre-K HOME scale in the EHSREP.

Grade 5: The Home Observation measure included items adapted from the Home Life Observational Scales that were used in the Project on Human Development in Chicago Neighborhoods (Leventhal et al. 2004); these scales were an expanded version of the H.O.M.E. Inventory (Bradley et al. 2000). The home observation scales were designed to assess the quality and quantity of support, stimulation, and structure provided to the child in the home environment. There were five subscales—parental warmth,

parental lack of hostility, parental verbal skills, internal environment, and external environment. Three subscales focus on the parent's observed behavior during the home visit (rather than the child's behavior) and the other two required that the data collector observe the physical surroundings in and around the home.

16.A. HOME: Parental Warmth Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	X
Variable Name			B3P_WARM	B4HMWARM	B5HMWARM
Variable Label			36m HOME: Warmth Scale	PreK: HOME Warmth	HOME: Parental Warmth
Source Variables			B3PFA07, B3PFA02, B3PFA06	B4PFA03, P4PFA04, B4PFA05, P4PFA06, B4PFA07, P4PFA08	B5PFA03, B5PFA04, B5PF13, B5PFA08, B5PFA06, B5PFA0f, B5PFA02, B5PFA07, B5PFA0i
EHSREP Study Psychometrics			Sample size: 1,794; possible range: 0 (minimum) - 3 (maximum); actual range: 0 (minimum) - 3 (maximum); mean: 0.3; standard deviation: 0.6; internal consistency reliability: 0.72	Sample size: 1,763; possible range: 0 (minimum) - 6 (maximum); actual range: 0 (minimum) - 6 (maximum); mean: 4.27; standard deviation: 1.45	Sample size: 1,763; possible range: 0 (minimum) - 9 (maximum); actual range: 0 (minimum) - 9 (maximum); mean: 6.59; standard deviation: 2.20

Variable Notes: The warmth subscale measures responsive and supportive parenting behavior observed by the interviewer during the home visit. Items in the warmth subscale are based entirely on interviewer observations of the parent and child during the interview. Higher scores indicate greater parental warmth.

36 Month: Sum of three items. Scores can range from 0, if none of the positive behaviors were observed, to 3, if all of the behaviors were observed.

Pre-K: Sum of six items. Scores can range from 0, if none of the positive behaviors were observed, to 6, if all of the behaviors were observed.

Grade 5: Sum of nine items. Scores can range from 0, if none of the positive behaviors were observed, to 9, if all of the behaviors were observed.

If 25 percent or more of the items are missing, B5HMWARM is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

16.B. HOME: External Environment Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		X
Variable Name			B3P_EXPH		B5HMEXTE
Variable Label			36m External Phys Envir Scale		HOME: External Environment
Source Variables			B3PFB01, B3PFB09, B3PFB08, B3PFB04, B3PFB05		B5PFB09a, B5PFB09, B5PFB09c, B5PFB09d, B5PFB09e, B5PFB09f, B5PFB09g, B5PFB09h
EHSREP Study Psychometrics			Sample size: 1,778; possible range: 5 (minimum) - 15 (maximum); actual range: 5 (minimum) - 15 (maximum)		Sample size: 1,550; possible range: 0 (minimum) - 8 (maximum); actual range: 0 (minimum) - 8 (maximum); mean: 6.14; standard deviation: 1.66

Variable Notes: The Home Observation included a set of checklist-style items that were completed by interviewers based on observations of the external environment of the home and the surrounding neighborhood to measure observed safety and adequacy of the exterior home environment. Higher scores indicate more positive external environment characteristics.

36 Months: B3P_EXPH is the sum of five items. Items in this subscale are based entirely on interviewer observations during the home visits and were each coded on a 3-point scale (with 1 indicating negative and 3 indicating positive features, for example, 1=parts of home appear unsafe, 2=home is neither safe or unsafe, 3=no obvious repairs to home are necessary) but on a binary scale for the total HOME). Scores can range from 5 to 15.

If less than 25 percent of the survey items are missing then B3P_EXPH is set equal to the sum of items: B3Pfb01, B3Pfb09, B3Pfb08, B3Pfb04, B3Pfb05. If 25 percent or more of the items are missing, B3P_EXPH is set to missing.

Grade 5: Items in this subscale are based entirely on interviewer observations during the home visits and were each coded on a 4-, 5-, or 6-point scale.

Recode B5PFB09a, B5PFB09, B5PFB09g so that (1, 2 = 1) and (3, 4 = 0)

Recode B5PFB09c, B5PFB09d so that (1 = 1) and (2, 3, 4 = 0)

Recode B5PFB09e so that (1, 2, 3 = 1) and (4, 5, 6 = 0)

Recode B5PFB09f so that (1 = 1) and (2, 3 = 0)

Recode B5PFB09h so that (1, 2, 3 = 1) and (4, 5 = 0).

B5HMEXTE is the sum of the eight recoded items. Scores can range from 0 to 8.

If 25 percent or more of the items are missing, B5HMEXTE is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

16.C. HOME: Internal Environment Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		X
Variable Name			B3P_INPH		B5HMINTE
Variable Label			36m Internal Phys Envir Scale		HOME: Internal Environment
Source Variables			B3PFB02, B3PFB06, B3PFB07		B5PFB01, B5PFB04, B5PFB07, B5PFB06, B5PFB02A, B5PFB06f, B5PFB06g, B5PFB06h
EHSREP Study Psychometrics			Sample size: 1,777; possible range: 3 (minimum) - 9 (maximum); actual range: 3 (minimum) - 9 (maximum); mean: 7.82; standard deviation: 1.50; internal consistency reliability: 0.77		Sample size: 1,547; possible range: 0 (minimum) - 8 (maximum); actual range: 0 (minimum) - 8 (maximum); mean: 6.81; standard deviation: 1.64

Variable Notes: The Home Observation included a set of checklist-style items that were completed based on observations of the internal home environment to measure the cleanliness, organization, and warmth of the home environment. Higher scores indicate more positive internal environment characteristics.

36 Month: B3P_INPH is the sum of three items. The items in this subscale are based entirely on interviewer observations during the home visits and were each coded on a 3-point scale (with 1 indicating negative and 3 indicating positive features) (but on a binary scale for the total HOME). Scores can range from 3 to 9.

Grade 5: The items in this subscale are based entirely on interviewer observations during the home visits and were each coded on as 1=yes, 0=no. B5HMINTE is the sum of the eight items. Scores can range from 0 to 8.

If 25 percent or more of the items are missing, B5HMINTE is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

16.D. HOME: Parental Lack of Hostility Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		X
Variable Name			B3P_HRSH		B5HMLCHO
Variable Label			36m Harsh Scale		HOME: parental lack of hostility
Source Variables			B3PFA11, B3PFA12, B3PFA13		B5PFA11A, B5PFA13A, B5PFA14A, B5PFA15A
EHSREP Study Psychometrics			Sample size: 1,801; possible range: 0 (minimum) - 3 (maximum); actual range: 0 (minimum) - 3 (maximum); mean: 0.28; standard deviation: 0.61; internal consistency reliability: 0.55		Sample size: 1,552; possible range: 0 (minimum) - 4 (maximum); actual range: 0 (minimum) - 4 (maximum); mean: 3.85; standard deviation: 0.66

Variable Notes: 36 Month: Harshness measures harsh or punitive parenting behavior observed during the home visit. Three items in this subscale are based entirely on interviewer observations of the parent and child during the visit, and include whether the parent scolded the child, physically restrained the child, or slapped or spanked the child.

The 36 Month Harsh subscale was created, despite having low alphas, because there was strong interest in this variable and because it was present in the 14 and 24 Month interviews. For this subscale (but not for the total HOME score), yes/no items were reverse-coded so that higher scores indicate more observed harsh behavior. Scores can range from 0, if no harsh behavior was observed, to 3, if the three types of harsh behavior were observed.

Grade 5: B5HMLCHO also measures harsh or punitive parenting behavior observed during the home visit, but unlike B3P_HRSH, higher scores for B5HMLCHO indicate lack of parent hostility.

Four items in this subscale are based entirely on interviewer observations of the parent and child during the visit, and include whether: parent shouts at child; expresses overt annoyance with or hostility toward child; parent slaps or spanks child; scolds, derogates or criticizes child more than once.

B5HMLCHO is based on the sum of four recoded items (1 = 0, 0 = 1). Scores can range from 0, if hostility was observed, to 4, if no hostility was observed. If any item is missing, B5HMINTE is set to missing.

16.E. HOME: Parental Verbal Skills Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5HMVERB
Variable Label					HOME: Parental Verbal Skills
Source Variables					B5PFA10, B5PFA10b, B5PFA10c, B5PFA10d
EHSREP Study Psychometrics					Sample size: 1,558; possible range: 0 (minimum) - 4 (maximum); actual range: 0 (minimum) - 4 (maximum); mean: 3.72; standard deviation: 0.66

Variable Notes: B5HMVERB includes four items scored as 1=yes or 0=no: Parent's speech is distinct, clear, and audible to the interviewer; Parent initiates verbal exchanges with visitor, asks questions, makes spontaneous comments; Parent expresses ideas freely and easily uses statements of appropriate length; Parent appears to readily understand the interviewer's questions.

B5HMVERB is the sum of the four items. Scores can range from 0 to 4 with higher scores representing better parental verbal skills. If any item is missing, B5HMVERB is set to missing.

16.F. HOME: Support of Language and Learning/Learning and Literacy Stimulation

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3P_Hlan		
Variable Label			36m HOME: Lang & Cog Stim		
Source Variables			B3Pfa03, B3Pfa04, B3Pfa05, B3Pfa10, B3P714d, B3P714b, B3P714c, B3P714a, B3P713, B3P712r, B3P803r, chfrndly, B3P707fr		
EHSREP Study Psychometrics			Sample size: 1,861; possible range: 0 (minimum) - 13 (maximum); actual range: 1 (minimum) - 13 (maximum); mean: 10.5; standard deviation: 2.0; internal consistency reliability: 0.67		

Variable Notes: HOME Support of Language and Learning /Learning and Literacy Stimulation is a 13-item scale including both observed and self-report items about the availability of toys and reading materials, parent-child verbal and literacy interaction, and parental encouragement of learning in several domains. It measures the breadth and quality of the mother's speech and verbal responses to the child during the home visit, as rated by the interviewer; whether parent encourages the child to learn shapes, colors, numbers, and the alphabet; the presence of books, toys, and games accessible to the child; and whether the parent reads to the child several times per week. Items are obtained by a combination of parent report and interviewer observation.

B3P_Hlan is the sum of the 13 items each of which is coded 1=yes or 0=no. Scores can range from 0 to 13 with higher scores representing greater parent support of child language, literacy, and learning stimulation.

If 25 percent or more of the items are missing, B3P_Hlan is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores.

16.G. HOME Learning Environment Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4HMLRN	
Variable Label				PreK: HOME Learning Environment	
Source Variables				B4PF01, B4PF02, B4PF03, B4PF04, B4PF05, B4PF06, B4PF07, B4PF08, B4PF09, B4PF10, B4PF11, B4PFA01, B4PF13, B4PF14	
EHSREP Study Psychometrics				Sample size: 1,118; possible range: 0 (minimum) - 14 (maximum); actual range: 0 (minimum) - 14 (maximum); mean: 10.67; standard deviation: 3.12	

Variable Notes: HOME Learning Environment is a 14-item scale including two sets of observed items:

Items B4PF01 to B4PF10 measure the presence of items in the home that aide in child learning and language stimulation such as toys that teach colors sizes, and shapes and child has toys that teach the names of animals. Items are coded 0 to 2 (0=Not observed in any room, 1=Yes, 2=Not observed-access limited):

Items B4PF11 to B4PF14 measure parent's language stimulation for the child, such as parent uses correct grammar and pronunciation. Items are coded yes or no (1=Yes, 0=No).

B4HMLRN is the sum of the 14 items with items B4PF01 through B4PF10 recoded to (2 = 0) (1 = 1) (0 = 0). Scores can range from 0 to 14 with higher scores indicating a more positive home learning environment.

16.H. HOME Physical Environment Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				B4HMENVN	
Variable Label				PreK: HOME Physical Environment	
Source Variables				B4PFB01, B4PFB08, B4PFB09, B4PFB04, B4PFB06, B4PFB07, B4PFB02A	
EHSREP Study Psychometrics				Sample size: 1, 699; possible range: 1 (minimum) - 21 (maximum); actual range: 7 (minimum) - 21 (maximum); mean: 17.34; standard deviation: 3.18	

Variable Notes: HOME Physical Environment is a 7-item scale that measures the state of the child's physical environment. For example, the structural safety of the home, outside play environment, and inside living space. Items are based on observations during the home visit using a 3-point scale with a score of 1 indicating a negative observation and a score of 3 indicating a positive observation.

B4HMENVN is the sum of the seven items. Scores can range from 1 to 21 with higher scores indicating a more positive physical home environment.

16.I. HOME: Total Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	X
Variable Name			B3P_HOME	B4HMTOTL	B5HOMET
Variable Label			36m Total HOME Score (with additional NLSY items)	PreK: HOME total score	HOME: Total score
Source Variables			B3Pfa01 through B3Pfa13, B3P714a, B3P714b, B3P714c, B3P714d, B3P713, B3P712r, B3P803r, B3P707fr, chfrndly, B3Pfb02r, B3Pfb07r, B3Pfb06r, B3Pfb05r, B3Pfb01r, B3Pfb09r, B3Pfb08r, B3Pfb04r, spank, B3P905r, B3P802r, B3P69r, B3P61ar, outings, museum	B4HMWARM, B4HMLRN, B4HMENVN, B4PFA10, B4PF15, B4PFA11, B4PFA12, B4PFA13	B5HMWARM, B5HMLCHO, B5HMVERB, B5HMINTE, B5HMEXTE
EHSREP Study Psychometrics			Sample size: 1,807; possible range: 0 (minimum) - 37 (maximum); actual range: 10 (minimum) - 37 (maximum); mean: 27.2; standard deviation: 4.8; internal consistency reliability: 0.80	Sample size: 1,631; possible range: 0 (minimum) - 49 (maximum); actual range: 7 (minimum) - 45 (maximum); mean: 34.06; standard deviation: 6.08	Sample size: 1,562; possible range: 0 (minimum) - 33(maximum); actual range: 4 (minimum) - 33 (maximum); mean: 27.12; standard deviation: 4.33; internal consistency reliability : 0.81 (all); 0.82 (White); 0.82 (African American); 0.77 (Hispanic)

Variable Notes: 36 Months: B3P_HOME measures the cognitive stimulation and emotional support provided by the parent in the home environment. It uses all 37 items based on either interviewer observation or parent report. All items are coded 0 or 1 and the maximum potential total score is 37. Higher scores indicate a more positive home environment.

The Total Home is the sum of all items.

If 25 percent or more of the items are missing then the Total Score is set to missing. If fewer than 25 percent are missing, the missing items are set to the average subscale item score.

Pre-K: B4HMTOTL is the sum of B4HMWARM, B4HMLRN, and B4HMENVN in addition to the following five items which are coded as 1=yes and 0=no:

B4PFA10. Caregiver uses complex sentence structure and some long words in conversing

B4PF15. Child's art work is displayed someplace in the house

B4PFA11. Caregiver did not scold or criticize child more than once during visit

B4PFA12. Caregiver does not use physical restraint, shake, grab or pinch child during visit

B4PFA13. Caregiver neither slapped nor spanked child during visit

Higher scores on this measure indicate higher quality of stimulation and support available to a child in the home environment. The maximum potential total score is 49.

Grade 5: B5HOMET is the sum of five subscales measuring the home environment. Higher scores on this measure indicate higher quality of stimulation and support available to a child in the home environment. The maximum potential total score is 33. If any of the subscale scores are missing, B5HOMET is missing.

Parent-Child Interaction Measures

17. Measure Name: High Chair (Frustration) Assessment

Citation: Shaw, D.S., K. Keenan, and J.I. Vondra. "The Developmental Precursors of Antisocial Behavior: Ages 1-3." *Developmental Psychology*, vol. 30, 1994, pp. 355-364.

McHale, Jean, Colleen O'Neal, So-Yun Lee, and Lisa Berlin. 14 Month Child-Parent Interaction Rating Scales for the High Chair Assessment. Unpublished scales, National Center for Children and Families, Teachers College, Columbia University, 1999.

Publisher Psychometrics:

Publisher Permission: Granted permission to include items in data file and documentation. See 14 Month old video protocol, "Task 1: Challenging Situation Child in the Booster Chair" in Codebook for task details. Specific coding documentation in restricted use documents.

Measure Notes: No variables from this measure are available.

17.A. High Chair (Frustration) Assessment

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X				
Variable Name					
Variable Label					
Source Variables					
EHSREP Study Psychometrics					

Variable Notes: No variables from this measure are currently available.

18. Measure Name: Nursing Child Assessment Satellite Training (NCAST) Parent-Child Interaction Teaching Scale

Citation: Barnard, K. Nursing Child Assessment Satellite Training (NCAST) Parent-Child Interaction Teaching Scale. Seattle, WA: University of Washington, School of Nursing, 1994.

Summer, G., and A.L. Spietz. *NCAST Caregiver/Parent-Child Interaction Teaching Manual, 2nd Edition*. Seattle, WA: NCAST Publications, University of Washington, June 1995.

Publisher Psychometrics: The NCAST manual presents the following standardized reliability correlation coefficients, n = 1,887:

Sensitivity to cues = 0.52; Response to distress = 0.80; Social-emotional growth fostering = 0.58; Cognitive growth fostering = 0.78; Clarity of cues = 0.50; Responsiveness to caregiver = 0.78; Total parent = 0.87; Total child = 0.80; Overall total score = 0.87

Publisher Permission: Granted permission to include items in data file and restricted-use documentation. See 2-year-olds video protocol, "Task 1 Teaching Task" in Codebook for task details. Individual source items are available in restricted use files.

Measure Notes: The Teaching Scale is used with infants and young children birth to three years of age. It is a reliable and valid means of observing and rating caregiver-child interaction during a novel situation for the purpose of assessing a dyad's strengths and areas needing improvement. Teaching scores from interactions with children as young as three months of age show a significant correlation with subsequent measures of children's cognitive abilities (Barnard, 1994). The scale is widely used in both clinical practice and research with families and young children.

The Teaching Scale consists of 73 binary (1=yes, 0=no) items organized into six subscales. Four subscales describe the parent's responsibility to the interaction: Sensitivity to Cues, Response to Distress, Social-Emotional Growth Fostering and Cognitive Growth Fostering, and two for the child: Clarity of Cues and Responsiveness to Caregiver. The Teaching Scale is scored following the observation of a session where the caregiver is asked to teach the child a defined age-appropriate activity. The length of administering the Teaching Scale varies but generally is completed in one to six minutes.

Several adaptations were made for use in EHSREP:

*The procedure was simplified to include only two choices of activity.

*The interaction time was shortened to three minutes.

*Coding was done via fine-grained analysis of the videotaped interaction, rather than live, immediately following the observation. This approach allowed for a single group of trained coders to analyze videotapes from all 17 EHSREP study sites and enabled coders to conduct several passes through the videotape to code the observed behaviors.

18.A. NCAST Total Score (24 Months)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		b2vt_tot			
Variable Label		24m NCAST Total Score			
Source Variables		b2vt01 through b2vt73			
EHSREP Study Psychometrics		Sample size: 1,708; possible range: 0 (minimum) - 73 (maximum); actual range: 32 (minimum) - 64 (maximum); mean: 51.67; standard deviation: 4.53; internal consistency reliability: 0.62 (Latino); 0.66 (African American); 0.67 (White)			

Variable Notes: The NCAST total score measures the child's ability to give cues and respond to the parent as well as the parent's ability to use the "teaching loop" (see child and parent total scores below).

b2vt_tot is the sum of all 73 items: b2vt01 through b2vt73 (1=yes, 0=no). Scores can range from 0 to 73 with low scores indicating that the parent and child did not show many "teaching loop" behaviors while high scores indicate that many "teaching loop" behaviors were used by both the child and parent.

If 25 percent or more of the items are missing, b2vt_tot is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores and multiply by 73.

18.B. NCAST Child Total (24 Months)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		b2vtctot			
Variable Label		24m NCAST Child Total			
Source Variables		b2vt51 through b2vt73			
EHSREP Study Psychometrics		Sample size: 1,710; possible range: 0 (minimum) - 23 (maximum); actual range: 5 (minimum) - 23 (maximum); mean: 16.16; standard deviation: 2.64; internal consistency reliability: 0.66 (Latino); 0.72 (African American); 0.65 (White)			

Variable Notes: The total child score measures the child's ability to give cues and respond to the parent.

b2vtctot is the sum of the 23 child items: b2vt51 through b2vt73 (1=yes, 0=no). Scores can range from 0 to 23 with low scores indicating that the child was not able to give clear cues to the parent or respond to the parent's engagement attempts and high scores indicating that the child was able to clearly communicate with the parent and could respond to the parent's cues.

If 25 percent or more of the items are missing, b2vtctot is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores and multiply by 23.

18.C. NCAST Parent Total (24-month)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		b2vtptot			
Variable Label		24m NCAST Parent Total			
Source Variables		b2vt01 through b2vt50			
EHSREP Study Psychometrics		Sample size: 1,710; possible range: 0 (minimum) - 50 (maximum); actual range: 19 (minimum) - 46 (maximum); mean: 35.52; standard deviation: 3.94; internal consistency reliability: 0.60 (Latino); 0.66 (African American); 0.67 (White)			

Variable Notes: The total parent score measures the parent's use of a "teaching loop" which is composed of:

1) parent alerts child by getting child's attention; lets child know what is about to happen
2) instruction – parent teaches child
3) performance – child's response to parent's instruction
4) feedback – parent responds to child's attempt at completing the task.

b2vtptot is the sum of the 50 parent items: b2vt01 through b2vt50 (1=yes, 0=no). Scores can range from 0 to 50 with low scores indicating that the parent did not display many teaching behaviors and high scores indicating that the parent showed a range of teaching behaviors and used the "teaching loop."

If 25 percent or more of the items are missing, b2vtptot is set to missing. If fewer than 25 percent of the items are missing, set the missing items to the average non-missing item scores and multiply by 50.

19. Measure Name: Parent-Child Interaction Rating Scales for the Play Doh Task

Citation: Fauth, Rebecca C., Christy Brady -Smith, and Jeanne Brooks-Gunn. "Parent-Child Interaction Rating Scales for the Play Doh Task." National Center for Children and Families (NCCF) Teachers College, Columbia University. Revised: March 31, 2003.

Publisher Psychometrics:

Publisher Permission: Granted permission to include scale scores on data file. See PreK Child Assessment Protocol, "VIII. Task 5: Speech Sample and Free-Play, II. Free Play" in Codebook for task details. Specific coding documentation in restricted use documents. Individual source items are not available in restricted use files.

Measure Notes: The Play Doh task was one of two activities parents and children complete as part of a 10-minute parent-child task videotaped in the home. The parent and child were given a board, two cans of Play Doh, a rolling pin, and a cookie cutter. They were told that they could play with the toys while the data collector finished her paperwork. They were given eight minutes to play. Five scales for parents' behavior were created: parental supportiveness, parental stimulation of cognitive development, parental intrusiveness, parental negative regard, and parental detachment. Three scales for child's behavior were created: child engagement of parent, child's quality of play, and child's negativity toward parent. The parent and child scales were coded on a scale of 1 (very low) to 7 (very high).

19.A. Child's Engagement of Parent

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdceng	
Variable Label				Pre-K play doh child engagement	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,761; possible range: 1 (minimum) - 7 (maximum); actual range: 2 (minimum) - 7 (maximum)	

Variable Notes: This scale measures the extent to which the child: (1) shows, initiates, and/or maintains interaction with the parent; (2) communicates positive regard and/or positive affect to the parent. The focus of this scale is the child's behavior (not the parent's behavior). A low score indicates that the child either actively ignored the parent or rejected the parent's attempts for interaction. A high score indicates that the child has positive affect with the parent; the child clearly enjoys the parent's participation in play.

19.B. Child Negativity Toward Parent

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdcneg	
Variable Label				Pre-K play doh child negativity	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,766; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 5 (maximum)	

Variable Notes: This scale measures the extent to which the child shows anger, hostility, or dislike toward parent. A high score indicates that the child is continuously and obviously angry with the parent. Low scores indicate that there are no overt nor covert signs of anger.

19.C. Child Quality of Play

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdcqua	
Variable Label				Pre-K play doh child quality of play	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,755; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	

Variable Notes: This scale measures the child's sustained involvement with objects and the quality of his/her play. This scale takes into account the quantity and quality of the following three components:
1) Attention to play objects - the extent to which a child remains attentive to and focused on the toys for the majority of the task.
2) Self-direction - the extent to which a child exerts effort, self-motivation, and confidence in his/her play.
3) Complexity of play - the extent to which a child makes attempts at new forms of play that challenge the child or show his/her intelligence/creativity.

A high score indicates that the child engages in high-quality play, that is, the child is consistently involved in the play, appears motivated throughout the task, clearly exerts effort, makes attempts at new forms of play, and plays with confidence. A low score indicates that the child engages in minimal-quality play, that is, the child cannot remain focused, rushes through play, lacks confidence, and mechanically follows parent's lead.

19.D. Parental Stimulation of Cognitive Development

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdpstm	
Variable Label				Pre-K play doh cognitive stimulation	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,761; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	

Variable Notes: This scale measures the extent to which a parent's effortful teaching enhances the child's cognitive and linguistic development. This scale takes into account the quantity and quality of the following three components:

1) Clear guidance - parent gives specific, age-appropriate, structured guidance.
2) Scaffolding - parent alters his/her assistance to the child's behavior and developmental level. The parent wants to stimulate the child.
3) Verbal stimulation - parent uses diverse, age-appropriate vocabulary, has conversations with the child, and gives descriptive explanations.

A high score indicates that the parent highly stimulates their child's cognitive development by being aware of the child's developmental level and trying to bring the child above that level. The parent provides clear guidance, scaffolds child's play, and provides verbal stimulation. A low score indicates that the parent minimally stimulates their child's cognitive development, that is, the parent does not give guidance or cues are too vague, does not structure play, does not give feedback, does not allow the child to freely play/explore, does not explain his/her own behavior, etc.

19.E. Parental Detachment

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdpdet	
Variable Label				Pre-K play doh detachment	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,759; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6 (maximum)	

Variable Notes: This scale measures the parent's lack of awareness, attention, and/or engagement with the child. It measures both the quantity and quality. High scores indicate that the parent almost pays no attention to the child. Low scores indicate that the parent shows no signs of detachment.

19.F. Parental Intrusiveness

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdpint	
Variable Label				Pre-K play doh intrusiveness	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,762; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	

Variable Notes: This scale measures the degree to which the parent controls the child rather than recognizing and respecting the child's perspective. Intrusive interactions are adult-centered rather than child-centered. High scores indicate that the parent is so intrusive that the child shows almost no self-direction. Low scores indicate no intrusive behavior.

19.G. Parental Negative Regard

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdpneg	
Variable Label				Pre-K play doh negative regard	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,766; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	

Variable Notes: This scale measures the parent's expression of discontent with, anger toward, disapproval of, and/or rejection of the child. High scores indicate that the parent rejects the child, is physically rough, and does not support the child emotionally. Low scores indicate no signs of negative regard.

19.H. Parental Supportiveness

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4pdpsup	
Variable Label				Pre-K play doh supportive	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,763; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	

Variable Notes: This scale measures the parent's emotional availability and physical and affective presence during the task. Supportive parenting involves:
1) Providing a secure base from which the child can explore - the parent lets the child play independently with the toys when he/she is interested and encourages or redirects the play as necessary.
2) Displaying emotional support and enthusiasm toward the child and his/her autonomous work - the parent is tuned into the child's emotional state.

High scores indicate that the parent is very supportive and responsive throughout the interaction. Low scores indicate that the parent is nearly always unavailable, negative, or non-responsive.

19.I. Parent Supportiveness – Average Supportive and Cognitive Stimulation

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				b4psup_r	
Variable Label				PreK: Parent supportiveness-ave. supportive and cog stim	
Source Variables				b4pdpsup, b4pdpstm	
EHSREP Study Psychometrics				Sample size: 1,703; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	

Variable Notes: b4psup_r is the average of parent support (b4pdpsup) and cognitive stimulation (b4pdpstm). It takes into account the parent's emotional availability and physical and affective presence as well as the parent's effortful teaching to enhance the child's cognitive and linguistic development.

High scores indicate that the parent scored high on both parent support and cognitive stimulation while low scores indicate that the parent scored low on both parent support and cognitive stimulation. Moderate scores indicate that the parent scored high on parent support and low on cognitive stimulation, or vice versa, or that the parent scored moderately on both.

20. Measure Name: Puzzle Challenge (Problem Solving) Task

Citation: Brady-Smith, Christy, Rebecca Ryan, Lisa J. Berlin, Jeanne Brooks-Gunn, and Allison Fuligni. Child-Parent Rating Scales for the Puzzle Challenge Task. Unpublished scales, National Center for Children and Families, Teachers College, Columbia University, 2001.

                Matas, L., R.A. Arend, and Sroufe. "Continuity of Adaptation in the Second Year: The Relationship Between Quality of Attachment and Later Competence." Child Development, vol. 49, 1978, pp. 547-556.

                Sroufe, L. A., B. Egeland, and T. Kreutzer. "The Fate of Early Experience Following Developmental Change: Longitudinal Approaches to Individual Adaptation in Childhood." Child Development, vol. 61, 1990, pp. 1363-1373.

Publisher Psychometrics: Persistence. 24 Months factor loading of 0.85 (tool problems); 42 Months factor loading of 0.92 (teaching tasks) and 0.88 (barrier box);

                Dependency. 24 Months factor loading of -0.83 (tool problems); 54 Months factor loading of -0.40 (curiosity box);

                Negative Affect. 24 Months factor loading of -0.31 (tool problems); 54 Months factor loading of -0.53 (curiosity box);

                Apathy. 42 Months factor loading of -0.57 (barrier box);

                Negativity. 42 Months factor loading of -0.83 (teaching tasks) (Sroufe et al., 1990).

Publisher Permission: Granted permission to include items in data file and documentation. See 3-year-olds Video Protocol, "Task 1: Problem Solving" in Codebook for task details. Specific coding documentation in restricted use documents.

Measure Notes: The child was given a puzzle to play with, and the parent was instructed to give the child any help needed. After three minutes, or earlier if the puzzle was completed, the interviewer gave the child a second, harder puzzle and asked the mother not to help the child. If that puzzle was completed or three minutes elapsed, another, more challenging puzzle was provided.

The puzzle challenge task was videotaped, and child and parent behaviors were coded by child development researchers according to strict protocols.

Positive and negative aspects of children's behavior with parents and parents' behavior with children were assessed on a seven-point scale, 1 indicating a very low incidence of the behavior and 7 indicating a very high incidence of the behavior. The 36 Month puzzle task scales are based on the "Manual for Coding the Puzzle Task" from the Newark Observational Study of the Teenage Parent Demonstration (TPD; Brooks-Gunn, Liaw, Michael, & Zamsky, 1992; Spiker, Ferguson, & Brooks-Gunn, 1993).

20.A. 36mos Puzzle Child Engagement of Parent

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPCENG		
Variable Label			36mos Puzzle Child Engagement of Parent		
Source Variables			B3VPCENG		
EHSREP Study Psychometrics			Sample size: 1,645; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.0; standard deviation: 0.9		

Variable Notes: Child engagement measures the extent to which the child shows, initiates, or maintains interaction with the parent. A child may express this by approaching or orienting himself or herself toward the parent, establishing eye contact with the parent, positively responding to the parent's suggestions, positive affect directed toward the parent and/or engaging the parent in the puzzle task. Very high engagement receives a 7.

20.B. 36mos Puzzle Child Frustration

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPCFRU		
Variable Label			36mos Puzzle Child Frustration		
Source Variables			B3VPCFRU		
EHSREP Study Psychometrics			Sample size: 1,642; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 2.7; standard deviation: 1.3		

Variable Notes: Frustration with Task measures the degree to which the child expresses frustration or anger toward the puzzle task, for example by putting hands in lap, whining, pushing away puzzle pieces, crying about the puzzle, saying it is too hard, or throwing puzzle pieces. Very high frustration receives a 7.

20.C. 36mos Puzzle Child Persistence

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPCPER		
Variable Label			36mos Puzzle Child Persistence		
Source Variables			B3VPCPER		
EHSREP Study Psychometrics			Sample size: 1,634; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.5; standard deviation: 1.2		

Variable Notes: Persistence measures how goal-oriented, focused, and motivated the child remains toward the puzzle throughout the task. The focus of this measure is on the child's apparent effort to solve the puzzle, not on how well the child performs. Very high persistence receives a 7.

20.D. 36mos Puzzle Parent Detachment

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPPDET		
Variable Label			36mos Puzzle Parent Detachment		
Source Variables			B3VPPDET		
EHSREP Study Psychometrics			Sample size: 1,646; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 1.6; standard deviation: 0.9		

Variable Notes: Detachment measures the extent to which the parent is inattentive to the child, or interacts in a perfunctory or indifferent manner. Very high parent detachment receives a 7.

20.E. 36mos Puzzle Parent Intrusiveness

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPPINT		
Variable Label			36mos Puzzle Parent Intrusiveness		
Source Variables			B3VPPINT		
EHSREP Study Psychometrics			Sample size: 1,646; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 2.7; standard deviation: 1.3		

Variable Notes: Intrusiveness measures the degree to which the parent controls the child rather than recognizing and respecting the validity of the child's independent efforts to solve the puzzle. Very high parent intrusiveness receives a 7.

20.F. 36mos Puzzle Parent Quality of Assistance

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPPQ_A		
Variable Label			36mos Puzzle Parent Quality of Assistance		
Source Variables			B3VPPQ_A		
EHSREP Study Psychometrics			Sample size: 1,646; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 3.5; standard deviation: 1.2		

Variable Notes: Quality of Assistance measures the frequency and quality of clear guidance to the child, flexible strategies for providing assistance, and diverse, descriptive verbal instructions and exchanges with the child. Very high parent quality of assistance receives a 7.

20.G. 36mos Puzzle Parent Supportive Presence

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3VPPSUP		
Variable Label			36mos Puzzle Parent Supportive Presence		
Source Variables			B3VPPSUP		
EHSREP Study Psychometrics			Sample size: 1,647; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.5; standard deviation: 1.3		

Variable Notes: Supportive Presence focuses on the parent's emotional availability and physical and affective presence during the puzzle task. Supportive presence involves providing a secure base from which the child can explore, and displaying emotional support and enthusiasm toward the child and his or her autonomous work. Very high parent supportive presence receives a 7.

21. Measure Name: Three-Bag Assessment (Semi-Structured Play)

Citation: NICHD Study of Early Child Care. "Procedures for Videotaping Mother-Child Interaction at 15 Months." Chapter 15.3 of The NICHD Study of Early Child Care and Youth Development, Phase I Manuals. 1992.

Ware, Anne, Christy Brady-Smith, Claudia O'Brien, and Lisa Berlin. Child-Parent Interaction Rating Scales for the Three-Bag Assessment (14 months). Unpublished scales, National Center for Children and Families, Teachers College, Columbia University, 1998.

Brady-Smith, Christy, Claudia O'Brien, Lisa Berlin, and Anne Ware. Child-Parent Interaction Rating Scales for the Three-Bag Assessment (24 months). Unpublished scales, National Center for Children and Families, Teachers College, Columbia University, 1999.

Brady-Smith, Christy, Claudia O'Brien, Lisa Berlin, Anne Ware, and Rebecca C. Fauth. Child-Parent Interaction Rating Scales for the Three-Bag Assessment (36 months). Unpublished scales, National Center for Children and Families, Teachers College, Columbia University, 2000

Brady-Smith, C., C. O'Brien, L. Berlin, A. Ware, R. Fauth, J. Brooks-Gunn. Child-parent interaction rating scales for the Three-Bag assessment: 36-month wave. New York: Teachers College, Columbia University; 2000.

NICHD Early Child Care Research Network. "Early child care and self-control, compliance, and behavior problems at 24 and 36 months." Child Development, vol. 69, 1998, pp. 1145–1170.

Publisher Psychometrics: NICHD Early Child Care Research Network (1998). Interrater reliability for off-task scales (activity level and sustained attention) = 0.69 and for mood scale (negative mood) = 0.73

Publisher Permission: Granted permission to include items in data file and documentation. See 14 Month olds Video Protocol and 2-year-olds Video Protocol, "Task 3: Free Play" and 3-year-olds Video Protocol, "Task 2: Free Play" in Codebook for task details. Specific coding documentation in restricted use documents.

Measure Notes: The parent and child were given three bags of interesting toys and asked to play with the toys in sequence. The semistructured play task was videotaped, and child and parent behaviors were coded by child development researchers according to strict protocols.

Positive and negative aspects of children's behavior with parents and parents' behavior with children were assessed on a 7-point scale, 1 indicating a very low incidence of the behavior and 7 indicating a very high incidence of the behavior.

This assessment was adapted for this evaluation from the Three Box coding scales used in the NICHD Study of Early Child Care (NICHD Early Child Care Research Network 1999).

The 24 and 36 Month scales were based on the "Early Head Start 14-month Child-Parent Interaction Rating Scales for the Three Bag Assessment" (Ware, Brady, O'Brien, and Berlin 1998), the NICHD Study of Early Child Care 15, 24, and 36 Month ratings of Parent-Child Interaction, and the "Manual for Coding Freeplay - Parenting Styles from the Newark Observational Study of the Teenage Parent Demonstration" (Brooks-Gunn et al. 1992).

21.A. Child Engagement of Parent (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3CENG	B2V3CENG	B3V3CENG		
Variable Label	14m Child Engagement of Parent 3-bag	24m Child Engagement of Parent 3-bag	36m Child Engagement of Parent 3-bag		
Source Variables	B1V3CENG	B2V3CENG	B3V3CENG		
EHSREP Study Psychometrics	Sample: 1,955; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	Sample: 1,795; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.3; standard deviation: 1.1	Sample size: 1,659; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.7; standard deviation: 1.0		

Variable Notes: Engagement measures the extent to which the child shows, initiates, or maintains interaction with the parent. This may be expressed by approaching or orienting toward the parent, establishing eye contact with the parent, positively responding to the parent's initiations, positive affect directed toward the parent and/or engaging the parent in play. Very high child engagement receives a 7.

21.B. Child Negativity Toward Parent (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3CNEG	B2V3CNEG	B3V3CNEG		
Variable Label	14m Child Negativity Toward Parent 3-bag	24m Child Negativity Toward Parent 3-bag	36m Child Negativity Toward Parent 3-bag		
Source Variables	B1V3CNEG	B2V3CNEG	B3V3CNEG		
EHSREP Study Psychometrics	Sample size: 1,955; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	Sample size: 1,795; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 1.7; standard deviation: 1.0	Sample size: 1,659; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 1.3; standard deviation: 0.6		

Variable Notes: Negativity Toward Parent measures the degree to which the child shows anger, hostility, or dislike toward the parent. Expressions may be overt (for example, forcefully rejecting a toy offered by the parent or pushing the parent away) or covert (for example, hitting or throwing an object in response to the parent's behavior). Very high child negativity receives a 7.

21.C. Child's Sustained Attention with Objects (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3CATN	B2V3CATN	B3V3CATN		
Variable Label	14m Child Sustained Attention 3-bag	24m Child Sustained Attention 3-bag	36m Child Sustained Attention 3-bag		
Source Variables	B1V3CATN	B2V3CATN	B3V3CATN		
EHSREP Study Psychometrics	Sample size: 1,955; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	Sample size: 1,795; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.0; standard deviation: 1.0	Sample size: 1,656; possible range: 1 (minimum) - 7 (maximum); actual range: 2 (minimum) - 7 (maximum); mean: 4.9; standard deviation: 1.0		

Variable Notes: Sustained Attention measures the degree to which the child is involved with toys presented in the three bags. Indicators include the degree to which the child "focuses in" when playing with an object and the extent to which the child coordinates activities with several objects and/or explores different aspects of a toy. Very high child sustained attention receives a 7.

21.D. Parent Detachment (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3PDET	B2V3PDET	B3V3PDET		
Variable Label	14m Parent Detachment 3-bag	24m Parent Detachment 3-bag	36m Parent Detachment 3-bag		
Source Variables	B1V3PDET	B2V3PDET	B3V3PDET		
EHSREP Study Psychometrics	Sample size: 1,956; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	Sample size: 1,793; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 1.4; standard deviation: 0.9	Sample size: 1,659; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6 (maximum); mean: 1.2; standard deviation: 0.6		

Variable Notes: Detachment measures the extent to which the parent is inattentive to the child, inconsistently attentive, or interacts with the child in an indifferent manner. For example, the parent may be inattentive, perfunctory, or cold when interacting with the child, may not respond to the child's talk or expressions, or may not try to engage the child with the new toys. Very high parent detachment receives a 7.

21.E. Parent Intrusiveness (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3PINT	B2V3PINT	B3V3PINT		
Variable Label	14m Parent Intrusiveness 3-bag	24m Parent Intrusiveness 3-bag	36m Parent Intrusiveness 3-bag		
Source Variables	B1V3PINT	B2V3PINT	B3V3PINT		
EHSREP Study Psychometrics	Sample size: 1,956; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	Sample size: 1,795; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 1.9; standard deviation: 1.0	Sample size: 1,659; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6 (maximum); mean: 1.6; standard deviation: 0.8		

Variable Notes: Intrusiveness measures the extent to which the parent exerts control over the child rather than acting in a way that recognizes and respects the validity of the child's perspective. Higher scores on intrusiveness indicate that the parent controlled the play agenda, not allowing the child to influence the focus or pace of play, grabbing toys away from the child, and not taking turns in play with the child. Very high parent intrusiveness receives a 7.

21.F. Parent Negative Regard (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3PNEG	B2V3PNEG	B3V3PNEG		
Variable Label	14m Parent Negative Regard 3-bag	24m Parent Negative Regard 3-bag	36m Parent Negative Regard 3-bag		
Source Variables	B1V3PNEG	B2V3PNEG	B3V3PNEG		
EHSREP Study Psychometrics	Sample size: 1,956; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)	Sample size: 1,795; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 1.4; standard deviation: 0.8	Sample size: 1,658; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6 (maximum); mean: 1.3; standard deviation: 0.6		

Variable Notes: Negative Regard measures the parent's expression of discontent with, anger toward, disapproval of, or rejection of the child. High scores on negative regard indicate that the parent used a disapproving or negative tone, showed frustration, anger, physical roughness, or harshness toward the child, threatened the child for failing at a task or not playing the way the parent desired, or belittled the child. Very high parent negative regard receives a 7.

21.G. Parent Supportiveness (3-bag)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1V3_SUP	B2V3_SUP	B3V3_SUP		
Variable Label	14m Parent Supportiveness 3-bag	24m Parent Supportiveness 3-bag	36m Parent Supportiveness 3-bag		
Source Variables	B1V3psen, B1V3pstm, B1V3ppos	B2V3psen, B2V3pstm, B2V3ppos	B3V3psen, B3V3pstm, B3V3ppos		
EHSREP Study Psychometrics	Sample size: 1,956; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 3.94; standard deviation: 1.06	Sample size: 1,793; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 3.98; standard deviation: 1.02; internal consistency reliability: 0.83	Sample size: 1,658; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6.33 (maximum); mean: 3.9; standard deviation: 0.9		

Variable Notes: Supportiveness is a composite measure and it is the mean of parental Sensitivity (BnV3psen), Cognitive Stimulation (BnV3pstm), and Positive Regard (BnV3ppos) during play with the child.

Sensitivity (BnV3psen) includes such behavior as acknowledgement of the child's affect, vocalizations, and activity; facilitating the child's play; changing the pace of play when the child seems under-stimulated or over-excited; and demonstrating developmentally appropriate expectations of behavior.

Stimulation of Cognitive Development (BnV3pstm) measures the quality and quantity of the parent's effortful teaching to enhance child's perceptual, cognitive, and linguistic development. Key features include being aware of the child's developmental level, efforts to bring the child above that level, flexibility and timing of instructions or explanations, and use of complex and varied language. Cognitive stimulation involves taking advantage of the activities and toys to facilitate learning, development, and achievement; for example, by encouraging the child to talk about the materials, by encouraging play in ways that illustrate or teach concepts such as colors or sizes, and by using language to label the child's experiences or actions, to ask questions about the toys, to present activities in an organized series of steps, and to elaborate on the pictures in books or unique attributes of objects.

Positive regard (BnV3ppos) includes praising the child, smiling or laughing with the child, expressing affection, showing empathy for the child's distress, and showing clear enjoyment of the child.

Supportiveness is the mean of parent's scores on bnv3psen, bnv3pstm, and bnv3ppos. Very high parent supportiveness receives a 7.

22. Measure Name: Videotaped Mother-Child Interaction: Disagreement Task

Citation: Parent-Child Discussion Task from the 5th-grade wave of the National Institute of Health and Human Development. Study of Early Child Care and Youth Development (NICHD SECCYD). Questionnaires can be found at: https://www.nichd.nih.gov/research/supported/Pages/seccyd.aspx

Publisher Psychometrics: NICHD SECCYD: Composite variable for child positive engagement (Affection + Mutuality - Negativity): alpha = 0.70; Composite variable for task orientation (Agency + Persistence): alpha = 0.90; Composite variable for maternal sensitivity (Supp Pres + Respect - Hostility): alpha = 0.87.

Publisher Permission: Specific coding documentation in restricted use documents.

Measure Notes: This video recorded parent-child interaction task was part of the home visit. The data collector gave the child a stack of 15 index cards; each card listed a topic that parents and children often disagree about, such as homework, television, or chores. The mother and child were instructed to go through the cards and select their top three areas of disagreement, then talk together about each one and try to resolve some of their disagreements. The child and parent were video recorded alone for eight minutes to discuss their disagreements. After eight minutes, the child was asked how he or she and the mother resolved their differences. The recordings were coded using a scheme that captures key elements of mother and child behaviors. Four scale scores were developed to describe the mother's behavior (positive regard, negative regard, respect for child's autonomy, use of coercion). Two scale scores were developed to describe the child's behavior (positive regard, negative regard). All scales were coded on a 7-point scale (1=very low, 2=low, 3=moderately low, 4=moderate, 5=moderately high, 6=high, 7=very high). See Grade 5 User Guide, Appendix E2: Parent-Child Activity in Codebook for task details.

22.A. Child Negativity toward Parent

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5VCNEG
Variable Label					Child Negativity Towards Parent
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,357; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6 (maximum)

Variable Notes: This scale reflects the child's hostility towards or rejection of the parent. Its expression can be verbal or non-verbal. Very high child negativity toward parent receives a 7.

22.B. Child Positivity toward Parent

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5VCPOS
Variable Label					Child Positivity Toward Parent
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,357; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)

Variable Notes: This scale reflects the child's affection for the parent. Its expression can be verbal or non-verbal. Very high child positivity toward parent receives a 7.

22.C. Parent Negativity toward Child

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5VPNEG
Variable Label					Parent Negativity Toward Child
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,356; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6 (maximum)

Variable Notes: This scale reflects the parent's hostility towards or rejection of the child. Its expression can be verbal or non-verbal. Very high parent negativity toward child receives a 7.

22.D. Parent Positivity toward Child

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5VPPOS
Variable Label					Parent Positivity Toward Child
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,357; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)

Variable Notes: This scale reflects the parent's affection for the child. Its expression can be verbal or non-verbal. Very high parent positivity toward child receives a 7.

22.E. Parent Respect for Child's Autonomy

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5VPRESP
Variable Label					Parent Respect for Child's Autonomy
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,317; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum)

Variable Notes: This scale assesses the extent to which the parent affirmed the child's individuality through three dimensions of behavior: (a) expressing an interest in hearing the child's opinion; (b) considering the child's perspective and validating it; and (c) exhibiting a willingness to negotiate with the child. Very high parent respect for child's autonomy receives a 7.

22.F. Parent Use of Coercion

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					B5VPCOER
Variable Label					Parent Use of Coercion
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,318; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 5 (maximum)

Variable Notes: This scale assessed the parent's assertion of power or use of force to support his/her position on one or more topics of disagreement. The use of coercion is a strategy for putting an end to the disagreement by merely cutting it off through the exercise of parental authority. Very high parent use of coercion receives a 7.

Direct Child Assessment Measures

23. Measure Name: Bayley Scales of Infant Development (BSID-II) Behavioral Rating Scales

Citation: Bayley, Nancy. Bayley Scales of Infant Development, Second Edition: Manual. New York: The Psychological Corporation, Harcourt Brace & Company, 1993.

Publisher Psychometrics: The reliability coefficients (alpha) for emotional regulation at 14 Months = 0.86; 24 Months = 0.90; and 36 Months = 0.86. The reliability coefficients (alpha) for orientation/engagement at 14 Months = 0.84; 24 Months = 0.89; and 36 Months = 0.87.

Publisher Permission: Granted permission to include items in data file by item number only. Individual source items are not available in documentation, but are cross-referenced to BRS item numbers (see "0-3 Child Record Booklet – 2. Bayley Behavior Rating Scale Orientation/Engagement and Emotional Regulation Scales" in Codebook. Individual source items are available in restricted use files.

Measure Notes: Bayley Behavior Rating Scale (BRS) measures the child's behavior during the Bayley MDI assessment. The BRS is one of the three component scales of the Bayley Scales of Infant Development-- Second Edition (Bayley 1993). The interviewer assesses the child's behavior by scoring items on a 5-point scale, with 5 indicating more positive behavior (for example, less frustration and more cooperation).

23.A. BSID BRS: Emotional Regulation

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1R_EREG	B2R_EREG	B3R_EREG		
Variable Label	14m BBRS: Emotional Regulation	24m BBRS: Emotional Regulation	36m BBRS: Emotional Regulation		
Source Variables	B1R2_2, B1R2_3, B1R2_5, B1R2_8, B1R2_9, B1R2_12, B1R2_13	B2R2_2, B2R2_3, B2R2_5, B2R2_8, B2R2_9, B2R2_12, B2R2_13	B3R2_2, B3R2_3, B3R2_5, B3R2_8, B3R2_9, B3R2_12, B3R2_13		
EHSREP Study Psychometrics	Sample size: 2,040; possible range: 1 (minimum) - 5 (maximum); actual range: 1.14 (minimum) - 5 (maximum)	Sample size: 1,910; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.6; standard deviation: 0.8; internal consistency reliability: 0.92	Sample size: 1,760; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.93; standard deviation: 0.76; internal consistency reliability: 0.90		

Variable Notes: Emotional Regulation captures the child's ability to change tasks and test materials; negative affect; and frustration with tasks during the administration of the BSID assessment.

BnR_EREG (emotional regulation) is the mean of items BnR2_2, BnR2_3, BnR2_5, BnR2_8, BnR2_9, BnR2_12, and BnR2_13, corresponding to Bayley Behavior Rating Scale items 6, 8, 10, 14, 15, 21, and 30. Item 2_2 (Bayley item 6) is reversed coded so that (1 = 5), (2 = 4), (3 = 3), (4 = 2), and (5 = 1). Bayley items 18, 19, and 29 were not administered.

If 25 percent or more of the items are missing, BnR_EREG is set to missing. If fewer than 25 percent are missing, the missing items are set to the average subscale item score.

23.B. SID BRS: Orientation/Engagement Scale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1R_ENG	B2R_ENG	B3R_ENG		
Variable Label	14m BBRS: Orientation/ Engagement Scale	24m BBRS: Orientation/ Engagement Scale	36m BBRS: Orientation/ Engagement Scale		
Source Variables	B1R2_1, B1R2_4, B1R2_6, B1R2_7, B1R2_11	B2R2_1, B2R2_4, B2R2_6, B2R2_7, B2R2_11	B3R2_1, B3R2_4, B3R2_6, B3R2_7, B3R2_11		
EHSREP Study Psychometrics	Sample size: 2,060; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum)	Sample size: 1,915; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.6; standard deviation: 0.8; internal consistency reliability: 0.83	Sample size: 1,769; possible range: 1 (minimum) - 5 (maximum); actual range: 1.20 (minimum) - 5 (maximum); mean: 3.80; standard deviation: 0.73; internal consistency reliability: 0.80		

Variable Notes: Orientation/Engagement measures the child's cooperation with the interviewer during the BSID assessment; positive affect; and interest in the test materials.

BnR_ENG (orientation/engagement) is the mean of items BnR2_1, BnR2_4, BnR2_6, BnR2_7, and BnR2_11, corresponding to Bayley Behavior Rating Scale items 5, 9, 11, 13, and 20.

If 25 percent or more of the items are missing, BnR_ENG is set to missing. If fewer than 25 percent are missing, the missing items are set to the average subscale item score.

24. Measure Name: Bayley Scales of Infant Development (BSID-II) Mental Development Index

Citation:	Bayley, Nancy. Bayley Scales of Infant Development, Second Edition: Manual. New York: The Psychological Corporation, Harcourt Brace & Company, 1993.
Publisher Psychometrics:	The reliability coefficients (alpha) for the mental scale at 14 Months = 0.86; 24 Months = 0.92; and 36 Months = 0.89.
Publisher Permission:	Granted permission to include items in data file by item number only. Individual source items are not available in documentation, but are available in restricted use files.
Measure Notes:	Bayley Scales of Infant Development- Second Edition: Mental Development Index (MDI) measures the cognitive, language, and personal-social development of children under age 3 1/2.

24.A. BSID – Mental Development Index

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X		
Variable Name	B1B_MDI	B2B_MDI	B3B_MDI		
Variable Label	14m Bayley MDI Score	24m Bayley MDI Score	36m Bayley MDI Score		
Source Variables	B1BI* plus scoring variables	B2BI* plus scoring variables	B3BI* plus scoring variables		
EHSREP Study Psychometrics	Sample size: 1,881; possible range: 49 (minimum) - 150 (maximum); actual range: 49 (minimum) - 130 (maximum); mean: 98.27; standard deviation: 11.13	Sample size: 1,780; possible range: 49 (minimum) - 150 (maximum); actual range: 49 (minimum) - 134 (maximum); mean: 89.08; standard deviation: 13.68	Sample size: 1,658; possible range: 49 (minimum) - 150 (maximum); actual range: 49 (minimum) - 134 (maximum); mean: 90.63; standard deviation: 12.63		

Variable Notes: The Bayley MDI was normed on a nationally representative sample of children of various ages so that raw scores can be converted to age-adjusted, standardized scores with a mean of 100 and a standard deviation of 15. Raw scores were calculated based on the child's age and basal and ceiling sets. The number of items before the beginning of the basal age item set was added to the total number of items in the child's item set for which the child received credit. Credit was given for all items prior to the basal item set, regardless of the actual score the child received on those items. The MDI score is calculated by using the child's raw score and chronological age in Table A.1 in the Bayley manual. Higher scores indicate greater cognitive, language, and personal-social development skills.

24.B. Bayley Language Factor Score (24 Months), Summary Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2B_MLAN			
Variable Label		BSID - Language Factor Score (24 Months)			
Source Variables		B2BI113, B2BI114, B2BI117, B2BI118, B2BI121, B2BI122, B2BI126, B2BI127, B2BI129, B2BI133, B2BI136, B2BI142			
EHSREP Study Psychometrics		Sample size: 1,780; possible range: 0 (minimum) - 12 (maximum); actual range: 0 (minimum) - 12 (maximum); mean: 7.62; standard deviation: 3.33			

Variable Notes: B2B_MLAN, Language Factor Score, is the sum of the following 12 items with factor loadings greater than 0.35: B2BI113, B2BI114, B2BI117, B2BI118, B2BI121, B2BI122, B2BI126, B2BI127, B2BI129, B2BI133, B2BI136, and B2BI142. Higher scores represent children with more advanced language skills.

24.C. Bayley Visual/Spatial Factor Score (24 Months), Summary Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X			
Variable Name		B2B_MVSP			
Variable Label		BSID - Visual/Spatial Factor Score (24 Months)			
Source Variables		B2BI115, B2BI120, B2BI123, B2BI124, B2BI125, B2BI128, B2BI130, B2BI134, B2BI137, B2BI143, B2BI144, B2BI145, B2BI147, B2BI149, B2BI150			
EHSREP Study Psychometrics		Sample size: 1,780; possible range: 0 (minimum) - 15 (maximum); actual range: 0 (minimum) - 15 (maximum); mean: 5.17; standard deviation: 3.09			

Variable Notes: B2B_MVSP, Visual/Spatial Factor Score, is the sum of the following 15 items with factor loadings greater than 0.35: B2BI115, B2BI120, B2BI123, B2BI124, B2BI125, B2BI128, B2BI130, B2BI134, B2BI137, B2BI143, B2BI144, B2BI145, B2BI147, B2BI149, and B2BI150. Children with higher scores have more advanced visual and spatial abilities. They are more likely to be able to match pictures, complete puzzles, and discriminate sizes.

24.D. Bayley 2 Factor Reasoning Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3B_M2FR		
Variable Label			36m Bayley 2 Factor Reasoning Score		
Source Variables			B3BI140, B3BI141, B3BI143, B3BI144, B3BI145, B3BI146, B3BI151, B3BI153, B3BI155, B3BI157, B3BI159, B3BI162, B3BI167		
EHSREP Study Psychometrics			Sample size: 1,658; possible range: 0 (minimum) - 13 (maximum); actual range: 0 (minimum) - 13 (maximum); mean: 5.56; standard deviation: 3.15		

Variable Notes: B3B_M2FR, Bayley 2 factor reasoning score, is the sum of the following 13 items with factor loadings greater than 0.35: B3BI140, B3BI141, B3BI143, B3BI144, B3BI145, B3BI146, B3BI151, B3BI153, B3BI155, B3BI157, B3BI159, B3BI162, and B3BI167. Children with higher scores have more advanced reasoning skills. They are able to understand concepts and prepositions, count, and sort.

24.E. Bayley 2 Factor Spatial Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X		
Variable Name			B3B_M2FS		
Variable Label			36m Bayley 2 Factor Spatial Score		
Source Variables			B3BI169, B3BI170, B3BI171, B3BI172, B3BI173, B3BI174		
EHSREP Study Psychometrics			Sample size: 1,658; possible range: 0 (minimum) - 6 (maximum); actual range: 0 (minimum) - 6 (maximum); mean: 0.75; standard deviation: 1.30		

Variable Notes: B3B_M2FS, Bayley 2 factor spatial score, is the sum of the following six items with factor loadings greater than 0.35: B3BI169, B3BI170, B3BI171, B3BI172, B3BI173, and B3BI174. Higher scores identify children who can understand how to move a pretend car on a map in different routes, form objects into specific shapes, classify objects, and understand another's perspective.

25. Measure Name: ECLS-K Cognitive Assessment

Citation: Pollack, J.M., S. Atkins-Burnett, M. Najarian, and D.A. Rock. Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), Psychometric Report for the Fifth Grade. NCES 2006–036. U.S. Department of Education, Washington, DC: National Center for Education Statistics, 2005.

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Publisher Psychometrics: ECLS-K, 5th grade: Language/Literacy alphas = 0.72-0.88; Reliability of IRT-generated theta score = 0.94; Correlated with teacher rating in Language/Literacy (r = 0.63); Math alphas = 0.58-0.88; Reliability of theta = 0.94. Correlated with teacher rating in Math (r = 0.65).

Publisher Permission: Granted permission to include scale scores on data file. Individual source items are not available in documentation or restricted use files.

Measure Notes: Children's reading and mathematics knowledge and skills were measured with the reading and math assessments that were developed for the U.S. Department of Education's Early Childhood Longitudinal Study, Kindergarten Class of 1998-99. The reading assessment included items that measured basic reading skills (e.g., phonemic awareness, single word decoding), vocabulary, and comprehension (initial understanding, developing interpretation, personal reflection, and demonstrating a critical stance). The passage reading section examined sentence, paragraph, and story comprehension and was composed of a variety of literary genres including poetry, letters, informational text, and narrative text. The mathematics assessment was designed to measure skills in conceptual knowledge, procedural knowledge, and problem solving. It addressed the following content strands: number sense, properties, and operations; measurement; geometry and spatial sense; data analysis, statistics, and probability; and patterns, algebra, and functions.

25.A. ECLS-K Lang/Lit: IRT Scale Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5RDSIRT
Variable Label					ECLS-K Lang/Lit: IRT Scale Score
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,554; possible range: 0 (minimum) - 186 (maximum); actual range: 31.5 (minimum) - 180.7 (maximum); mean: 127.57; standard deviation: 27.90

Variable Notes: The ECLS-K fifth grade reading assessment included questions in the following content areas: initial understanding, developing interpretation, personal reflection, and critical stance. Students completed a two-stage adaptive assessment. All students completed a first-stage, 26-item routing test. Students then completed one of three second-stage level tests based on their performance on the router. The second-stage low-difficulty form consisted of 24 items, the middle-difficulty form consisted of 25 items, and the high-difficulty form consisted of 31 items. Because students were administered different sets of items, Item Response Theory (IRT) methods were used to place their scores on a common scale as if they had completed all of the items in each difficulty level form. The score represents an estimate of the number of items the student would have answered correctly if she or had had taken all of the 186 questions in all of the ECLS-K kindergarten, first, third, and fifth grade reading forms (this approach is identical to the scoring approach used in the ECLS-K fifth grade round of analysis). Higher scores indicate higher levels of performance on the reading assessment.

25.B. ECLS-K Math and Language/Literacy Success

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5sucacd
Variable Label					C5: Academic success-- 1 on both math and lan/lit
Source Variables					C5RDTSCR_suc, C5MATHRA_suc
EHSREP Study Psychometrics					Sample size: 1,549; possible range: 0 (minimum) - 1 (maximum); actual range: 0 (minimum) - 1 (maximum); mean: 0.27; standard deviation: 0.44

Variable Notes: The academic success index is defined by performance on two academic outcomes: ECLS-K Language and Literacy and Mathematics. For the index, children are categorized as successful if they score above the cutoff for both variables.

C5RDTSCR_suc = Language and Literacy success

C5RDTSCR_suc = 1, if children score at or above 50 points on Language and Literacy.

C5RDTSCR_suc = 0, if children score below 50 points on Language and Literacy.

C5MATHRA_suc = Mathematics success

C5MATHRA_suc = 1, if children score at or above 9.6 on Mathematics

C5MATHRA_suc = 0, if children score below 9.6 on Mathematics

If C5RDTSCR_suc=1 and C5MATHRA_suc=1, then C5sucacd=1; else C5sucacd=0. If either is missing then C5sucacd is set to missing.

25.C. ECLS-K Math Routing Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5MATHRA
Variable Label					ECLS-K Math Routing Score
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,552; possible range: 0 (minimum) - 18 (maximum); actual range: 0 (minimum) - 18 (maximum); mean: 8.37; standard deviation: 4.66

Variable Notes: The ECLS-K fifth grade math assessment included questions in the following content areas: number sense, properties, and operations, measurement, geometry and spatial sense, data analysis, statistics, and probability, and patterns, algebra, and functions. Only the math routing test was used in the EHSREP Grade 5 assessment. The router included 18 items that were administered to all children. C5MATHRA is the number of items that children answered correctly.

26. Measure Name: Height and Weight

Citation: Tourangeau, K., Nord, C., Lê T., Pollack, J.M., and Atkins-Burnett, S. (2006). Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Combined User's Manual for the ECLS-K Fifth-Grade Data Files and Electronic Codebooks (NCES 2006–032). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

West, Jerry, Nikki Aikens, Barbara Lepidus Carlson, Cassandra Meagher, Lizabeth Malone, Anne Bloomenthal, Annalee Kelly, Kristina Rall, and Rita Zota. "Head Start Family and Experiences Survey: 2006 User's Manual." Report submitted to the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation. Washington, DC: Mathematica Policy Research, August 2010.

Publisher Psychometrics:

Publisher Permission: See Grade 5 User Guide, Appendix E-3: Height Weight Measurement for task description.

Measure Notes: Children's height and weight were each measured twice following a protocol that has been used in other federal government surveys (the ECLS-K, ECLS-B, and the Head Start Family and Child Experiences Survey, 2006 and 2009 Cohorts). A stadiometer, was used to measure children's height and a digital scale was used to measure children's weight. Height was measured twice and recorded to the nearest 1 cm. If measurements were more than 2 cm apart, a third measurement was performed and recorded. Weight was measured twice and recorded to the nearest 0.1 kg. If measurements were more than 0.2 kg apart, a third measurement was performed and recorded. Children's height and weight information, coupled with information to adjust for sex and age, allows for an accurate measurement of children's body-mass index (BMI).

26.A. Child Composite Height in CM

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5HEIGHT
Variable Label					C5: Childs composite Height in CM
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,499; actual range: 123.0 (minimum) - 171.5 (maximum); mean: 147.01; standard deviation: 7.91

Variable Notes: C5HEIGHT is equal to the average measurement of children's height. If two measurements are available for the child, C5HEIGHT is equal to the average of the two. If a third measurement is available, select the two measures with the smaller difference and take the average of them.

26.B. Child Composite Weight in KG

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5WEIGHT
Variable Label					C5: Childs composite Weight in KG
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,499; actual range: 22 (minimum) - 100 (maximum); mean: 47.46; standard deviation: 14.62

Variable Notes: C5WEIGHT is equal to the average measurement of children's weight. If two measurements are available for the child, C5WEIGHT is equal to the average of the two. If a third measurement is available, select the two measures with the smaller difference and take the average of them.

26.C. Child BMI is Greater than or Equal to 95

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5BMI95
Variable Label					G5: Child BMI >= 95
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,499; possible range: 0 (minimum) - 1 (maximum); actual range: 0 (minimum) - 1 (maximum)

Variable Notes: C5BMI95 is an indicator of the child being obese. C5BMI95 = 1 if the child's weight is in the 95th percentile or higher for the child's age and gender. If C5BMIPCT >= 95 then C5BMI95 = 1; if C5BMIPCT < 95 then C5BMI95 = 0.

26.D. Percentile for Body Mass Index for Age

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5BMIPCT
Variable Label					G5: percentile for body mass index-for-age
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,499; possible range: 0 (minimum) - 100 (maximum); actual range: 100 (minimum) - 1 (maximum); mean: 71.93; standard deviation: 28.63

Variable Notes: C5BMIPCT was calculated using a modified SAS code from the Centers for Disease Control and Prevention's (CDC) website: http://www.cdc.gov/nccdphp/dnpao/growthcharts/resources/sas.htm

The CDC SAS program requires the use of weight and kilograms and height in centimeters and calculates the BMI percentiles for a child's sex and age. The program identifies outliers for cases that are too low or high depending on the child's age. Children in less than the 5th percentile are considered underweight; if in the 5th to less than 85th percentile are considered normal weight; if in the 85th to less than 95th percentile are considered overweight; and are obese if in the 95th percentile or higher.

26.E. Z-Score for Body Mass Index for Age

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5BMIZ
Variable Label					G5: z-score for body mass index-for-age
Source Variables					
EHSREP Study Psychometrics					Sample size: 1,499; possible range: -6 (minimum) - 3 (maximum); actual range: -6 (minimum) - 3 (maximum); mean: 0.86; standard deviation: 1.18

Variable Notes: C5BMIZ was calculated using a modified SAS code from the Centers for Disease Control and Prevention's (CDC) website: http://www.cdc.gov/nccdphp/dnpao/growthcharts/resources/sas.htm

The CDC SAS program requires the use of weight and kilograms and height in centimeters and calculates the BMI z-scores (standard deviation scores) for a child's sex and age. The program identifies outliers for cases that are too low or high depending on the child's age.

27. **Measure Name: Leiter-R International Performance Scale – Revised, Attention Sustained and Examiner Rating Scale, Sociability**

Citation: Roid, G. H. and L. J. Miller. Leiter International Performance Scale-Revised, Attention Sustained and Examiner Rating Scale, Sociability. Examiners manual: Leiter International Performance Scale-Revised. Chicago: Stoelting Co., 1997.

Publisher Psychometrics: Internal reliability coefficients for children ages 2-5 are 0.97, 0.94, 0.93, 0.92, 0.93, 0.94, 0.91, and 0.93 for the attention, organization/impulse control, activity level, sociability, energy and feelings, mood and regulation, anxiety, and sensory reactivity subscales, respectively. The Attention Sustained scale internal reliability for 4- to 5-year-olds is 0.83.

Publisher Permission: Not ascertained. Individual source items are not available in documentation, but are available in restricted use files.

Measure Notes: The Examiner Ratings are used to rate children's emotion regulation at the prekindergarten assessment. At the end of the child assessment, assessors complete a set of ratings about the child's behavior observed during the assessment. Children's behavior is evaluated in eight domains: (1) attention, (2) organization and impulse control, (3) activity level, (4) sociability, (5) energy and feelings, (6) mood and regulation, (7) anxiety, and (8) sensory reactivity. Each item in a domain is rated on a 4-point scale anchored to the rate at which a child exhibited a behavior during the testing session: (0) Rarely/never occurred (i.e., less than roughly 10% of the time), (1) Sometimes occurred (i.e., around 10 to 50% of the time), (2) Often occurred (i.e., approximately 50 to 90% of the time), or (3) Usually/always occurred (i.e., more than 90% of the time).

The Attention Sustained measure is a timed cancellation task for 4- to 5-year-olds. Children are shown a target figure and then must find and cross out as many of the target figures on the page as possible as fast as they can within the given amount of time.

27.A. PreK: Leiter-R Examiner Rating Attention Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRATT	
Variable Label				PreK: Leiter-R Examiner Rating Attention Scaled Score	
Source Variables				Leiter-R Examiner Rating Items A1 through A10	
EHSREP Study Psychometrics				Sample size: 1,821; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum); internal consistency reliability: 0.93	

Variable Notes: Sum Leiter items A1 through A10 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate greater levels of attention, concentration, focus, and indistractibiltiy.

27.B. PreK: Leiter-R Examiner Rating Organization Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRORG	
Variable Label				PreK: Leiter-R Examiner Rating Organization Scaled Score	
Source Variables				Leiter-R Examiner Rating Items B1 through B8	
EHSREP Study Psychometrics				Sample size: 1,821; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum)	

Variable Notes: Sum Leiter items B1 through B8 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate appropriate levels of self-regulation and control.

27.C. PreK: Leiter-R Examiner Rating Activity Level Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRACT	
Variable Label				PreK: Leiter-R Examiner Rating Activity Level Scaled Score	
Source Variables				Leiter-R Examiner Rating Items C1 through C4	
EHSREP Study Psychometrics				Sample size: 1,838; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum)	

Variable Notes: Sum Leiter items C1, C2, C3, and C4 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate appropriate activity level.

27.D. PreK: Leiter-R Examiner Rating Sociability Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRSOC	
Variable Label				PreK: Leiter-R Examiner Rating Sociability Scaled Score	
Source Variables				Leiter-R Examiner Rating Items D1 through D5	
EHSREP Study Psychometrics				Sample size: 1,839; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum); internal consistency reliability: 0.81	

Variable Notes: Sum Leiter items D1 through D5 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate greater sociability, positive/friendly behaviors.

27.E. PreK: Leiter-R Examiner Rating Energy and Feelings Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRFEL	
Variable Label				PreK: Leiter-R Examiner Rating Energy and Feelings Scaled Score	
Source Variables				Leiter-R Examiner Rating Items E1 through E6	
EHSREP Study Psychometrics				Sample size: 1,829; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum)	

Variable Notes: Sum Leiter items E1 through E6 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate greater levels of energy and positive emotion.

27.F. PreK: Leiter-R Examiner Rating Mood and Regulation Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRREG	
Variable Label				PreK: Leiter-R Examiner Rating Mood and Regulation Scaled Score	
Source Variables				Leiter-R Examiner Rating Items F1 through F6	
EHSREP Study Psychometrics				Sample size: 1,818; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum)	

Variable Notes: Sum Leiter items F1 through F6 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate appropriate behaviors, thoughts, and regulation.

27.G. PreK: Leiter-R Examiner Rating Anxiety Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRANX	
Variable Label				PreK: Leiter-R Examiner Rating Anxiety Scaled Score	
Source Variables				Leiter-R Examiner Rating Items G1 through G6	
EHSREP Study Psychometrics				Sample size: 1,822; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum)	

Variable Notes: Sum Leiter items G1 through G6 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate lack of anxiety.

27.H. PreK: Leiter-R Examiner Rating Sensory Reactivity Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRSEN	
Variable Label				PreK: Leiter-R Examiner Rating Sensory Reactivity Scaled Score	
Source Variables				Leiter-R Examiner Rating Items H1 through H4	
EHSREP Study Psychometrics				Sample size: 1,831; possible range: 1 (minimum) - 10 (maximum); actual range: 1 (minimum) - 10 (maximum)	

Variable Notes: Sum Leiter items H1 through H4 to obtain the raw score. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 10. Higher scores indicate appropriate levels of concentration and reactions.

27.I. PreK: Leiter-R Cognitive Social Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LCOGNS	
Variable Label				PreK: Leiter-R Cognitive Social Standard Score	
Source Variables				Leiter-R Examiner Rating Items A1 through A10; B1 through B8; C1 through C4; and D1 through D5	
EHSREP Study Psychometrics				Sample size: 1,803; possible range: 54 (minimum) - 117 (maximum); actual range: 54 (minimum) - 117 (maximum); mean: 93.61; standard deviation: 10.47; internal consistency reliability: 0.96	

Variable Notes: Add the raw scores for the following subscales: Attention (A1 through A10), Organization/Impulse Control (B1 through B8), Activity Level (C1 through C4), and Sociability (D1 through D5). Use the Leiter-R Examiner Manual to convert the raw score sum to a standardized composite score with a mean of 100 and a standard deviation of 15. Higher scores indicate greater levels of attention, organization, focus, thoughtfulness, and maturity. Children who score high are hard working and likeable.

27.J. PreK: Leiter-R Emotion Regulation Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LEMORS	
Variable Label				PreK: Leiter-R Emotion Regulation Standard Score	
Source Variables				Leiter-R Examiner Rating Items E1 through E6; F1 through F6; G1 through G6; and H1 through H4	
EHSREP Study Psychometrics				Sample size: 1,796; possible range: 41 (minimum) - 113 (maximum); actual range: 41 (minimum) - 113 (maximum); mean: 91.14; standard deviation: 9.80; internal consistency reliability: 0.93	

Variable Notes: Add the raw scores for the following subscales: Energy and Feelings (E1 through E6), Mood and Regulation (F1 through F6), Anxiety (G1 through G6), and Sensory Reactivity (H1 through H4). Use the Leiter-R Examiner Manual to convert the raw score sum to a standardized composite score with a mean of 100 and a standard deviation of 15. Higher scores indicate greater levels of energy, positive emotion, and lack of anxiety. Higher scores also indicate appropriate levels of self-regulation and indistractibility.

27.K. Leiter-R Attention Sustained Total Correct Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRASC	
Variable Label				PreK: Leiter-R Attention Sustained total correct scaled score	
Source Variables				.	
EHSREP Study Psychometrics				Sample size: 1,779; possible range: 1 (minimum) - 19 (maximum); actual range: 1 (minimum) - 19 (maximum); internal consistency reliability: 0.75	

Variable Notes: Sum the total number of correct responses to obtain a raw score of total correct. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 19. Higher scores indicate more focused behavior.

27.L. Leiter-R Attention Sustained Total Errors Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LTRASE	
Variable Label				PreK: Leiter-R Attention Sustained total errs scaled score	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,777; possible range: 1 (minimum) - 19 (maximum); actual range: 1 (minimum) - 13 (maximum); internal consistency reliability: 0.75	

Variable Notes: Sum the total number of incorrect responses to obtain a raw score of total incorrect. Use the raw score and child's age to obtain the standardized scale score from the Leiter-R Examiner's Manual. Scaled scores range from 1 to 19. Higher scores indicate that the child may have attention-deficit or learning disorders.

27.M. Leiter-R Attention Sustained Adjusted Correct Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4LASADC	
Variable Label				PreK: Leiter-R AS adjusted correct scaled score	
Source Variables				.	
EHSREP Study Psychometrics				Sample size: 1,752; possible range: 1 (minimum) - 19 (maximum); actual range: 1 (minimum) - 19 (maximum); internal consistency reliability: 0.75	

Variable Notes: Subtract the total number of errors from the total number correct to get the adjusted correct raw score. Higher scores indicate greater ability to sustain attention.

28. Measure Name: Matrix Reasoning

Citation: Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV)

Williams, P.E.; Weiss, L.G.; Rolfhus, E.L. WISC-IV Technical Report #2 Psychometric Properties. In The Psychological Corporation's WISC-IV Technical Manual #2; The Psychological Corporation: San Antonio, TX, USA, 2003.

Belsky, Janet K. (1990). The Psychology of Aging Theory, Research, and Interventions. Pacific Grove: Brooks/Cole Publishing Company. Horn, Jack (1970) "Organization of data on life-span development of human abilities" in Life-span developmental psychology: Research and Theory.

R. Goulet and P.B. Baltes (eds.). New York: Academic Press. Horn, Jack (1976) "On the myth of intellectual decline during adulthood" in American Psychologist.

Publisher Psychometrics: In national standardization sample (aged 6 to 16; n=2,200), split-half reliability = 0.89 and test-reliability with subsample = 0.77 (Williams, Weiss, and Rolfhus, 2003).

Publisher Permission: Individual source items are not available in documentation or restricted use files.

Measure Notes: The Matrix Reasoning subtest from the Wechsler Intelligence Scale for Children (Fourth Edition) (WISC-IV) measures children's fluid reasoning or fluid intelligence. It measures children's on-the-spot reasoning ability, a skill that is not dependent on experience (Belsky 1990). The Matrix Reasoning subtest has 35 items that involve the child looking at an incomplete matrix (for example, a two-by-two matrix with three poodles) and completing the matrix by choosing from one of five response options (for example, Collie, Labrador, Poodle, Great Dane, Eskimo Husky). The test requires limited language and no hand manipulation on the part of the child.

28.A. Matrix Reasoning Scaled Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5MRSS
Variable Label					C5: Matrix Reasoning Scaled Score
Source Variables					C5MRRS, C5MRCLGI
EHSREP Study Psychometrics					Sample size: 1,554; possible range: 1 (minimum) - 19 (maximum); actual range: 1 (minimum) - 19 (maximum); mean: 8.44; standard deviation: 3.28

Variable Notes: The Matrix Reasoning Raw Score, C5MRRS, is the Ceiling Item, C5MRCLGI, minus the number of errors between the basal and ceiling. Use the child's age and the raw score, C5MRRS, to look up the Matrix Reasoning Scaled Score, C5MRSS, in the publisher provided user guide.

If 25 percent or more of the items between the basal and the ceiling items were missing, do not compute a raw or scaled score; set to missing.

29. Measure Name: Peabody Picture Vocabulary Test-III

Citation: Dunn, Lloyd M. and Leota M. Dunn. *Peabody Picture Vocabulary Test-Third Edition*. Circle Pines, MN: American Guidance Service, 1997.

Publisher Psychometrics: For 10-year-olds in national norming sample (n=100): Cronbach's alpha = 0.96 (Form IIIA) and 0.95 (Form IIIB). Split-half reliability = 0.94 (IIIA) and 0.95 (IIIB). Test-retest reliability on subsample = 0.88 (IIIA) and 0.89 (IIIB). PPVT-III correlated with WISC-III Verbal IQ (r=0.91 for IIIA and r=0.92 for IIIB) for sample of 41 7-11-year-olds. Good discriminant validity.

Publisher Permission: Granted permission to include responses to individual items in data file by item number only along with scale scores. Individual source items are not available in documentation, but are available in restricted use files.

Measure Notes: The Peabody Picture Vocabulary Test, Third Edition (PPVT-III) measures children's knowledge of the meaning of spoken words, his or her receptive vocabulary for Standard American English. The test is appropriate for children and adults from age 2.5 and over (Dunn and Dunn 1997).

The child is presented with four pictures and is asked to point to the picture that matches the word spoken by the interviewer. The PPVT-III was normed on a nationally representative sample of children and adults of various ages so that raw scores can be converted to age-adjusted, standardized scores with a mean of 100 and a standard deviation of 15.

29.A. PPVT Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	X
Variable Name			B3RPPVTS	C4PPVT3S	C5PPVT3S
Variable Label			36m PPVT-III Standard Score	PreK: PPVT-III Standard Score	C5: PPVT-III Standard Score
Source Variables					
EHSREP Study Psychometrics			Sample size: 1,424; possible range: 40 (minimum) - 160 (maximum); actual range: 40 (minimum) - 125 (maximum); mean: 83.01; standard deviation: 15.56	Sample size: 1,674; possible range: 40 (minimum) - 160 (maximum); actual range: 40 (minimum) - 152 (maximum); mean: 91.50; standard deviation: 15.16; internal consistency reliability: 0.96	Sample size: 1,544; possible range: 40 (minimum) - 160 (maximum); actual range: 40 (minimum) - 138 (maximum); mean: 93.97; standard deviation: 15.74

Variable Notes: The PPVT-III (Dunn and Dunn 1997) is a nationally normed measure of receptive vocabulary, with a normative mean of 100 and standard deviation of 15, the Standard Score of the PPVT-III.

The ceiling rule for the PPVT-III is that a ceiling is established if there are eight or more errors in the item set, or the sum of correct items in the set is four or less. Raw and standard scores were not computed if 25 percent or more of the items between the lowest item administered and the ceiling item were missing. The raw and standard scores for those cases were set to missing.

Higher scores suggest greater English receptive vocabulary skills.

30. Measure Name: Story and Print Concepts

Citation: Adaptation of the following prereading assessment procedures:

Clay, M.M. Concepts About Print Tests. Portsmouth, NH: Heinemann Books, 1979.

Teale, W.H. "Developmentally Appropriate Assessment of Reading and Writing in the Early Childhood Classroom." Elementary School Journal, vol. 89, no. 2, 1988, pp. 173-184.

Teale, W.H. "The Promise and Challenge of Informal Assessment in Early Literacy." In Assessment for Instruction in Early Literacy, edited by L. Morrow and J. Smith. Englewood Cliffs, NJ: PrenticeHall, 1990.

Mason, J.M. and J. Stewart. "The CAP Early Childhood Diagnostic Instrument." (Prepub. ed.) Chicago: American Testronics, 1989.

The task uses: Brown, M. W., & Hurd, C. (1947). Goodnight moon. New York: Harper.

Publisher Psychometrics:

Publisher Permission: Individual source items are not available in documentation, but are available in restricted use files.

Measure Notes: Story and Print Concepts includes items designed to assess children's knowledge of how print is used to convey meaning. The child is handed "Goodnight Moon" upside down and backwards. The assessor notes whether the child turns it around to put the book upright with the front cover on top. Then the child is asked to identify where the name of the book is written, where the material to be read begins, and in what direction the reading proceeds. The assessor reads the story to the child and asks basic questions about the content of the story and the mechanics of reading.

30.A. Story and Print Concepts – Book Comprehension

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4BKCOMP	
Variable Label				PreK: story and print concepts--book comprehension	
Source Variables				Story and Print items H04, H05, H06, H09	
EHSREP Study Psychometrics				Sample size: 1,841; possible range: 0 (minimum) - 6 (maximum); actual range: 0 (minimum) - 6 (maximum)	

Variable Notes: Measures the content of the story and if the child can remember key facts from the story.

Book comprehension includes questions about the content and key facts of the story.

Items H04, H05, and H06 were scored as 0=no, 1=yes. Item H09 was scored from 0 to 3 with the number of points corresponding to the number of things the child named from the book. C4BKCOMP is the sum of four items. Scores can range from 0 to 6 with higher scores indicating greater book comprehension.

30.B. Story and Print Concepts – Book Knowledge

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4BKKNOW	
Variable Label				PreK: story and print concepts--book knowledge	
Source Variables				Story and Print variables H01, H02, H03, H07, H08	
EHSREP Study Psychometrics				Sample size: 1,850; possible range: 0 (minimum) - 5 (maximum); actual range: 0 (minimum) - 5 (maximum)	

Variable Notes: Book knowledge included questions about the location of the front of the book, when/where one should begin reading, the title, and the author.

Items were scored as 0=no, 1=yes. C4BKKNOW is the sum of five items. Scores can range from 0 to 5 with higher scores indicating greater book knowledge.

31. Measure Name: Test de Vocabulario en Imagenes Peabody

Citation: Dunn, Lloyd M., Eligio R. Padilla, Delia E. Lugo, and Leota M. Dunn. *Examiner's Manual for the Test de Vocabulario en Imagenes Peabody* (Peabody Picture Vocabulary Test) Adaptacion Hispanoamericana (Hispanic-American Adaptation). Circle Pines, MN: American Guidance Service, 1986.

Publisher Psychometrics: The median internal consistency reliability reported by the publisher is 0.93, and its established age norms are based on a sample of same-age peers in Mexico and Puerto Rico in the mid-1980s.

Publisher Permission: Granted permission to include response items in data file by item number only along with scale scores. Individual source items are not available in documentation, but are available in restricted use files.

Measure Notes: Test de Vocabulario en Imagenes Peabody (TVIP) measures the listening comprehension of spoken words in Spanish for Spanish-speaking and bilingual children from ages 2.5 to 18 (Dunn, Lloyd, Eligio, Padilla, Lugo, and Dunn 1986),

The child is presented with four pictures and is asked to point to the picture that matches the Spanish word spoken by the interviewer. The TVIP was normed on a sample of Mexican and Puerto Rican children of various ages so that raw scores can be converted to age-adjusted, standardized scores with a mean of 100 and a standard deviation of 15.

31.A. TVIP Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			B3RTVIPS	C4TVIPS	
Variable Label			36m TVIP Standard Score	PreK TVIP Standard Score	
Source Variables					
EHSREP Study Psychometrics			Sample size: 228; possible range: 55 (minimum) - 145 (maximum); actual range: 78 (minimum) - 131 (maximum); mean: 95.11; standard deviation: 8.16	Sample size: 170; possible range: 55 (minimum) - 145 (maximum); actual range: 55 (minimum) - 145 (maximum); mean: 84.39; standard deviation: 23.09; internal consistency reliability: 0.96 (EHS sample of Spanish-speaking children)	

Variable Notes: The TVIP is a normed measure of Spanish receptive vocabulary, with a mean of 100 and standard deviation of 15. The ceiling rule for the TVIP is that a ceiling is established if there are 6 out of 8 errors. Raw and standard scores were not computed if 25 percent or more of the items between the lowest item administered and the ceiling item were missing. The raw and standard scores for those cases were set to missing.

Higher scores suggest greater Spanish receptive vocabulary.

32. Measure Name: Woodcock-Johnson Tests of Achievement – Revised (WJ-R) / Woodcock-Muñoz Tests of Cognitive Ability

Citation: Woodcock, R., & Johnson, M. (1989). *Woodcock Johnson Psycho-Educational Test Battery-Revised*. Chicago: Riverside Publishing Company.

Woodcock, R. W., & Munoz-Sandoval, A. F. (1996). Batería Woodcock-Munoz: Pruebas de Aprovechamiento-Revisada. Itasca, IL: Riverside Publishing.

Publisher Psychometrics: Internal consistency of Applied Problems = 0.91 with preschool children.

Internal consistency of Letter Word Identification = 0.92 with preschool children.

Publisher Permission: Permission to include items in data file by item number only along with scale scores. Individual source items are not available in documentation, but are available in restricted use files.

Measure Notes: The Spanish version of the WJ-R, the *WM-R* was used for children whose primary language was Spanish.

Two subscales of the WJ/WM-R were used to assess children's preacademic skills:

1) Letter Word Identification/ Identificación de Letras y Palabras - children's ability to identify decontextualized individual letters and words.
2) Applied Problems/ Problemas Aplicados - children's skills in analyzing and solving practical math problems.

32.A. PreK: WJ Applied Problems Standard Score / WM Applied Problems Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4WJAPSS / C4WMAPSS	
Variable Label				PreK: WJ Applied Problems Standard Score / PreK: WM Applied Problems Standard Score, WCPP-generated	
Source Variables					
EHSREP Study Psychometrics				WJ: Sample size: 1,755; possible range: 0 (minimum) - 200 (maximum); actual range: 0 (minimum) - 136 (maximum); mean: 88.31; standard deviation: 20.08; internal consistency reliability:0.85 WM: Sample size: 115; possible range: 0 (minimum) - 200 (maximum); actual range: 48 (minimum) - 143 (maximum); mean: 86.85; standard deviation: 16.85; internal consistency reliability: 0.85	

Variable Notes: Standard scores allow for comparisons of an individual's performance relative to others of the same age and language (English-speaking or Spanish-speaking). Standard scores have a mean of 100 and a standard deviation of 15. Scores above or below the mean indicate that, compared to same-age and English or Spanish-speaking peers, a child's counting and simple addition/subtraction, and emerging numeracy skills are, respectively, more or less advanced.

32.B. PreK: WJ Letter-Word Identification Standard Score / WM Letter-Word Standard Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4WJLWSS / C4WMLISS	
Variable Label				PreK: WJ Letter-Word Identification Standard Score / PreK: WM Letter-Word Standard Score, WCPP-generated	
Source Variables					
EHSREP Study Psychometrics				WJ: Sample size: 1,754; possible range: 0 (minimum) - 200 (maximum); actual range: 44 (minimum) - 136 (maximum); mean: 89.32; standard deviation: 13.66; internal consistency reliability: 0.84 WM: Sample size: 115; possible range: 0 (minimum) - 200 (maximum); actual range: 59 (minimum) - 184 (maximum); mean: 88.69; standard deviation: 17.15; internal consistency reliability: 0.96	

Variable Notes: Standard scores allow for comparisons of an individual's performance relative to others of the same age and language (English-speaking or Spanish-speaking). Standard scores have a mean of 100 and a standard deviation of 15. Scores above or below the mean indicate that, compared to same-age and English or Spanish-speaking peers, a child's skills in identifying isolated letters and words are, respectively, more or less advanced.

Child Care Observation Measures

33. Measure Name: Arnett Scale of Caregiver Behavior/Caregiver Interaction Scale

Citation: Arnett, J. "Caregivers in Day-Care Centers: Does Training Matter?" *Journal of Applied Developmental Psychology*, vol. 10, 1989, pp. 541-552.

Publisher Psychometrics: Minimum loading of 49 for each four factors. Positive Interaction Eigenvalue = 11.66, variance = 0.39; Punitiveness Eigenvalue = 4.54, variance = 0.15; Permissiveness Eigenvalue = 2.38, variance = 0.08; Detachment Eigenvalue = 1.11, variance = 0.04

Publisher Permission: Granted permission to include all items in data file and documentation.

Measure Notes: The Arnett Scale measures the individual teacher's behavior in the classroom. Each item is rated on a 4-point scale indicating the extent to which the characteristic is true of the caregiver: 1=not at all true; 2=somewhat true; 3=quite a bit true; 4=very much true. It consisted of 26 items that measured five areas of teacher behavior: sensitivity, punitiveness, detachment, permissiveness, and prosocial interaction (Arnett 1989). Scale scores were created for detachment, harshness, permissiveness, sensitivity, and a total score.

33.A. Arnett Caregiver Interaction Scale – Detachment

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CISDET	
Variable Label				PreK: Arnett Caregiver Interaction Scale Detachment	
Source Variables				B40_C05, B40_C13, B40_C21, B40_C23	
EHSREP Study Psychometrics				Sample size: 1,009; possible range: 0 (minimum) - 12 (maximum); actual range: 0 (minimum) - 12 (maximum); mean: 10.81; standard deviation: 1.98	

Variable Notes: The detachment scale captures whether the teacher is uninvolved in what the children are doing:

B40_C05. Seems distant or detached from children

B40_C13. Spends considerable time in activity not involving interaction with the children

B40_C21. Doesn't seem interested in children's activities

B40_C23. Doesn't supervise the children very closely

Recode items so that items coded as 1 become 0, items coded as 2 become 1, items coded as 3 become 2, and items coded as 4 become 3. Then, reverse code items so that those recoded as 0 become 3, those as 1 become 2, those as 2 become 1, and those as 3 become 0. Sum the items to create the detachment scale score. Scores can range from 0 to 12 with higher scores indicating less teacher detachment.

33.B. Arnett Caregiver Interaction Scale – Harshness

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CISHAR	
Variable Label				PreK: Arnett Caregiver Interaction Scale Harshness	
Source Variables				B40_C02, B40_C04, B40_C10, B40_C12, B40_C17, B40_C20, B40_C22, B40_C24, B40_C26	
EHSREP Study Psychometrics				Sample size: 1,005; possible range: 0 (minimum) - 27 (maximum); actual range: 0 (minimum) - 27 (maximum); mean: 24.02; standard deviation: 3.53	

Variable Notes: The harshness scale captures whether the teacher uses harsh methods for disciplining children:

B40_C02. Seems critical of children

B40_C04. Places high value on obedience

B40_C10. Speaks with irritation or hostility to the children

B40_C12. Threatens children in trying to control them

B40_C17. Punishes the children without explanation

B40_C20. Finds fault easily with children

B40_C22. Seems to prohibit many of the things that children want to do

B40_C24. Expects the children to exercise self-control; e.g., to be undisruptive for group, provider-led activities, to be able to stand in line calmly

B40_C26. Seems unnecessarily harsh when scolding or prohibiting children

Recode items so that items coded as 1 become 0, items coded as 2 become 1, items coded as 3 become 2, and items coded as 4 become 3. Then, reverse code all items except for B40_C24 so that those recoded as 0 become 3, those as 1 become 2, those as 2 become 1, and those as 3 become 0. Sum the items to create the harshness scale score. Scores can range from 0 to 27 with higher scores indicating less teacher harshness.

33.C. Arnett Caregiver Interaction Scale – Permissiveness

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CISPER	
Variable Label				PreK: Arnett Caregiver Interaction Scale Permissiveness	
Source Variables				B40_C09, B40_C15, B40_C18	
EHSREP Study Psychometrics				Sample size: 1,005; possible range: 0 (minimum) - 9 (maximum); actual range: 0 (minimum) - 9 (maximum); mean: 7.24; standard deviation: 1.69	

Variable Notes: The permissiveness scale captures whether the teacher is too lenient and is not firm enough with the children:

B40_C09. Doesn't try to exercise much control over the children

B40_C15. Doesn't reprimand children when they misbehave

B40_C18. Exercises firmness when necessary

Reverse code item 18. Sum items 9, 15, and 18.

Recode items so that items coded as 1 become 0, items coded as 2 become 1, items coded as 3 become 2, and items coded as 4 become 3. Then, reverse code all items except for B40_C18 so that those recoded as 0 become 3, those as 1 become 2, those as 2 become 1, and those as 3 become 0. Sum the items to create the permissiveness scale score. Scores can range from 0 to 9 with higher scores indicating less teacher permissiveness.

33.D. Arnett Caregiver Interaction Scale – Sensitivity

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CISSEN	
Variable Label				PreK: Arnett Caregiver Interaction Scale Sensitivity	
Source Variables				B40_C01, B40_C03, B40_C06, B40_C07, B40_C08, B40_C11, B40_C14, B40_C16, B40_C19, B40_C25	
EHSREP Study Psychometrics				Sample size: 988; possible range: 0 (minimum) - 30 (maximum); actual range: 0 (minimum) - 30 (maximum); mean: 21.34; standard deviation: 6.73	

Variable Notes: The sensitivity scale captures how warm and affectionate the teacher is:

B40_C01. Speaks warmly to the children

B40_C03. Listens attentively when children speak to her

B40_C06. Seems to enjoy the children

B40_C07. When the children misbehave, explains the reason for the rule they are breaking

B40_C08. Encourages the children to try new experiences

B40_C11. Seems enthusiastic about the children's activities and efforts

B40_C14. Pays positive attention to the children as individuals

B40_C16. Talks to children on a level they can understand

B40_C19. Encourages children to exhibit prosocial behavior, e.g., sharing, helping

B40_C25. When talking to children, kneels, bends, or sits at their level to establish better eye contact

Recode items so that items coded as 1 become 0, items coded as 2 become 1, items coded as 3 become 2, and items coded as 4 become 3. Sum the items to create the sensitivity scale score. Scores can range from 0 to 30 with higher scores indicating greater teacher sensitivity.

33.E. Arnett Caregiver Interaction Scale – Total Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X	X	
Variable Name	ARNETT14	ARNETT24	ARNETT36	T4CISTTL	
Variable Label	14m observ: ARNETT CAREGIVER SCALE	24m observ: ARNETT CAREGIVER SCALE	36m observ: ARNETT CAREGIVER SCALE	PreK: Arnett Caregiver Interaction Scale Total Score	
Source Variables	Arnett items 1 through 26	Arnett items 1 through 26	Arnett items 1 through 26	B40_C01 through B40_C26	
EHSREP Study Psychometrics	Sample size: 507; possible range: 0 (minimum) - 4 (maximum); actual range: 1.38 (minimum) - 4 (maximum); mean: 3.29; standard deviation: 0.45	Sample size: 543; possible range: 0 (minimum) - 4 (maximum); actual range: 1.31 (minimum) - 4 (maximum); mean: 3.29; standard deviation: 0.51	Sample size: 588; possible range: 0 (minimum) - 4 (maximum); actual range: 1.31 (minimum) - 4 (maximum); mean: 3.36; standard deviation: 0.51	Sample size: 1,009; possible range: 0 (minimum) - 4 (maximum); actual range: 1.04 (minimum) - 4 (maximum); mean: 3.44; standard deviation: 0.47	

Variable Notes: Scores can range from 0 to 4. A higher score on the total mean item score indicates "better" (more positive, appropriate) interactions.

Items 2, 4, 5, 9, 10, 12, 13, 15, 17, 20, 21, 22, 23, and 26 are reverse coded. The total score is obtained by summing items 1 through 26 and dividing the total by 26.

34. Measure Name: Child-Caregiver Observation System (C-COS)

Citation: Boller, K., S. Sprachman, and the Early Head Start Research Consortium. *The Child-Caregiver Observation System Instructors Manual*. Princeton, NJ: Mathematica Policy Research, 1998.

Developed by Mathematica staff for EHSREP. The Child-Caregiver Observation System (C-COS) is based on instruments developed by the National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network (Observational Record of the Caregiving Environment, ORCE; NICHD Early Child Care Research Network 1997) and by Carollee Howes (Adult Involvement Scale; Howes and Smith 1995).

U.S. Department of Health and Human Services. (2004, February). The role of Early Head Start programs in addressing the child care needs of low-income families with infants and toddlers: Influences on child care use and quality. Washington, DC: Department of Health and Human Services, Administration for Children and Families

Publisher Psychometrics: The intraclass correlation in EHSREP was greater than 0.80. Internal consistency reliability for constructs such as "Any Provider Talk" ranged from 0.90 to 0.94.

Publisher Permission: Granted permission to include items in data file and documentation

Measure Notes: C-COS data was collected for children in child care centers and for children cared for by family child care providers or relatives. Data were recorded on the Child-Focused Observation Form at 24 and 36 Months. The C-COS is a child-focused observation system designed to measure the experiences (frequency and quality of caregiving behavior) of an individual child in his or her caregiving environment. The observation is conducted over a two-hour period using a time-sampling procedure. Every 20 minutes, the observer completed a 5-minute child-focused observation. Within the five minutes, 30-second cycles ensued in which observers watched the focus child for 20 seconds and then spent 10 seconds recording what they observed. Observers wore a tape recorder and an earphone that signaled when to observe and record the observations. Five categories of behavior and interaction were coded 10 times per 5-minute observation (behavior was coded only one time even if it occurred more than once):

1) Type of talk any caregiver engages in with the focus child.

2) Who the focus child talks to.

3) Who the focus child is interacting with or attending to.

4) The focus child's affect and whether or not he was being annoyed or was annoying others.

5) Who the main caregiver was who was interacting with the focus child or who was attempting to interact with the child.

Three overall quality ratings were coded once at the end of each 5-minute cycle on a scale of 0 to 4 with 4 indicating more positive behavior:

1) The overall behavior of caregivers toward the focus child.

2) The behavior of the focus child toward any caregivers.

3) The behavior of the focus child toward other children.

During a 2-hour observation, six child-focused observations are conducted. (Boller et al. 1998)

34.A. Caregiver Responds to Focus Child Talk (Count)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X	X		
Variable Name		B2KPRSTK	B3KPRSTK		
Variable Label		24m CCOS: A1 Caregiver Responds To FC TALK (count)	36m CCOS: A1 Caregiver Responds To FC TALK (count)		
Source Variables		C-COS item A01	C-COS item A01		
EHSREP Study Psychometrics		Sample size: 499; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 58 (maximum); mean: 8.38; standard deviation: 9.64	Sample size: 565; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 38 (maximum); mean: 7.58; standard deviation: 7.09		

Variable Notes: Caregiver responds to focus child talk was coded 10 times over the course of each 5-minute observation. The observer watched to see if any caregivers responded verbally to the focus child's speech or attempts to speak. Language not directed toward the focus child or the focus child as part of a larger group was not coded. Additionally, imitating the child's nonverbal vocalization (for example, grunting) or responding in a way that inhibits the child's speech (for example, "shut up") was not coded as the caregiver's talk should extend, enhance, or encourage the child's language. Scores can range from 0 to 60 with higher scores indicating more incidences of a caregiver responding to the focus child's talk.

34.B. Total Negative Behavior (Count)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X	X		
Variable Name		B2K_NEGT	B3K_NEGT		
Variable Label		24m CCOS: C5 D2 D3 D4 Total Neg Behavior (count)	36m CCOS: C5 D2 D3 D4 Total Neg Behavior (count)		
Source Variables		C-COS items C05, D02, D03, D04	C-COS items C05, D02, D03, D04		
EHSREP Study Psychometrics		Sample size: 499; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 50 (maximum); mean: 5.35; standard deviation: 6.02	Sample size: 565; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 36 (maximum); mean: 4.05; standard deviation: 4.84		

Variable Notes: The total negative behavior count is the sum of the following four items that were coded 10 times over the course of each 5-minute observation divided by 4:

C05. The focus child is wandering/unoccupied – the focus child is not interacting with or attending to anyone or material for a period of at least five seconds.

D02. The focus child was upset/crying – the focus child has a tantrum, yells in anger/frustration, looks sad or hurt, or is crying.

D03. The focus child is hit/bit/bothered by other children – the focus child is hit, pushed, kicked, bit, or bothered by another child. This includes pulling hair, pinching, and any other form of aggression.

D04. The focus child was hitting/biting/bothering other children – the focus child hits, pushes, kicks, bites, or bothers another child. This includes pulling hair, pinching, and any other form of aggression.

Scores can range from 0 to 60 with higher scores indicating more incidences of negative behavior.

34.C. Caregiver Initiated Talk (Count)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X	X		
Variable Name		B2KPINTK	B3KPINTK		
Variable Label		24m CCOS: Caregiver Initiated Talk (count)	36m CCOS: Caregiver Initiated Talk (count)		
Source Variables		C-COS item A02	C-COS item A02		
EHSREP Study Psychometrics		Sample size: 499; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 59 (maximum); mean: 22.96; standard deviation: 11.85	Sample size: 565; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 57 (maximum); mean: 19.94; standard deviation: 11.72		

Variable Notes: Caregiver initiated talk (language or communication requested) was coded 10 times over the course of each 5-minute observation. The observer watched to see if the caregiver said something to the child that provoked language or communication from the child. Usually, this was in the form of a question. Scores can range from 0 to 60 with higher scores indicating more incidences of caregiver initiated talk.

34.D. Total Any Provider Talk to Focus Child (Count)

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave		X	X		
Variable Name		B2K_NEPT	B3K_NEPT		
Variable Label		24m CCOS: A2-A5 Tot Any Provider Talk To FC (count)	36m CCOS: A2-A5 Tot Any Provider Talk To FC (count)		
Source Variables		C-COS items A02, A03, A04, A05	C-COS items A02, A03, A04, A05		
EHSREP Study Psychometrics		Sample size: 499; possible range: 0 (minimum) - 60 (maximum); actual range: 1 (minimum) - 60 (maximum); mean: 30.74; standard deviation: 12.89	Sample size: 565; possible range: 0 (minimum) - 60 (maximum); actual range: 0 (minimum) - 60 (maximum); mean: 26.87; standard deviation: 12.69		

Variable Notes: The total any provider talk to focus child count is the sum of the following four types of talk items that were coded 10 times over the course of each 5-minute observation divided by 4:

A02. Language or Communication Requested – the caregiver said something to the child that provoked language or communication from the child. Usually, this was in the form of a question.

A03. Action Requested – the caregiver asked a question or made a statement that provoked the child to do something but did not require a communicative response. Usually this was coded when the caregiver told the child to do something or not do something, for example, gave an order.

A04. Reads – the caregiver reads to the focus child or group that the focus child is part of from any written material (it must be reading, not just pointing to pictures).

A05. Other Talk/Singing – any caregiver directed utterance (that contains words, not just sounds) to the focus child that was not coded in A02 through A04. Also included here is singing and emotional state requests to the child, for example "Smile" or "Don't be sad."

Scores can range from 0 through 60 with higher scores indicating more incidences of caregiver talk to the focus child.

35. Measure Name: Early Childhood Environmental Rating Scale - Revised

Citation: Harms, T., Clifford, R. M., & Cryer, D. (1998). *Early Childhood Environment Rating Scale, Revised Edition*. New York: Teachers College Press.

Zill, Nicholas, Kim Kwang, Alberto Sorongon, Randy Herbison, Xtria Cheryl Clark. "Head Start Family and Child Experiences Survey: 1997 Data User's Guide." Report submitted to the United States Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation. Washington, DC: Westat, June 2005.

Publisher Psychometrics: Internal consistency (Cronbach's alpha) ranged from 0.71 (parents and staff) to 0.88 (activities) with an alpha coefficient for the total scale of 0.92 (Harms, T., R.M. Clifford, and D. Cryer. *Early Childhood Environment Rating Scale: Revised Edition*. New York: Teachers College Press, 2005.).

Publisher Permission: Measure is copyrighted. Granted permission to release data but not the instruments. Any user of data can purchase an instrument from the publisher. Individual source items are not available in documentation, but are available in restricted use files (labeled with ECERS-R item numbers).

Measure Notes: The Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) is an overall rating of classroom quality based on the structural features of the classroom (Harms et al. 2005). It is a 43-item scale organized under seven categories: personal care routines, furnishings and display for children, language-reasoning experiences, activities, interactions, program structure, and parents and staff. Each item is scored on a seven point scale that ranges from 1=inadequate, 3=minimal, 5=good, to 7=excellent care. EHSREP created mean scores based on the seven ECERS-R subscale categories as well as five subscales developed in the Head Start Family and Child Experiences Survey: 1997 Cohort (FACES 1997). The subscales developed in FACES 1997 do not match the specifications of the publishers.

35.A. ECERS-R Activities Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC4_AVE	T4ECRACT	
Variable Label			ECERS Activities Average Score	PreK: ECERS-R Activities	
Source Variables			ECERS-R items 19, 20, 21, 22, 23, 24, 25, 26, 27, and 28	ECERS-R items 19, 20, 21, 22, 23, 24, 25, 26, 27, and 28	
EHSREP Study Psychometrics			Sample size: 487; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.02; standard deviation: 1.32	Sample size: 984; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.65; standard deviation: 1.27	

Variable Notes: Activities score is the mean of the following items:

19. Fine motor
20. Art
21. Music/movement
22. Blocks
23. Sand/water
24. Dramatic play
25. Nature/science
26. Math/number
27. Use of TV, video, and/or computers
28. Promoting acceptance of diversity.

Higher scores indicate higher quality learning activities.

35.B. ECERS-R Interaction Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC5_AVE	T4ECRINT	
Variable Label			ECERS Activities Average Score	PreK: ECERS-R Interaction	
Source Variables			ECERS-R items 29, 30, 31, 32, and 33	ECERS-R items 29, 30, 31, 32, and 33	
EHSREP Study Psychometrics			Sample size: 489; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.12; standard deviation: 1.62	Sample size: 986; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.54; standard deviation: 1.54	

Variable Notes: Interaction score is the mean of the following items:

29. Supervision of gross motor activities

30. General supervision of children (other than gross motor)

31. Disciple

32. Staff-child interactions

33. Interactions among children

Higher scores indicate higher quality interactions.

35.C. ECERS-R Language and Reasoning Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC3_AVE	T4ECRLAN	
Variable Label			ECERS Language and Reasoning Average Score	PreK: ECERS-R Language and Reasoning	
Source Variables			ECERS-R items 15, 16, 17, and 18	ECERS-R items 15, 16, 17, and 18	
EHSREP Study Psychometrics			Sample size: 483; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.67; standard deviation: 1.51	Sample size: 983; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.37; standard deviation: 1.44	

Variable Notes: Language and Reasoning score is the mean of the following items:

15. Books and pictures
16. Encouraging children to communicate
17. Using language to develop reasoning skills
18. Informal use of language

Higher scores indicate higher quality language and reasoning.

35.D. ECERS-R Parents and Staff Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC7_AVE	T4ECRPAR	
Variable Label			ECERS Parents & Staff Average Score	PreK: ECERS-R Parents and Staff	
Source Variables			ECERS-R items 38, 39, and 40	ECERS-R items 38, 39, and 40	
EHSREP Study Psychometrics			Sample size: 439; possible range: 1 (minimum) - 7 (maximum); actual range: 1.67 (minimum) - 7 (maximum); mean: 5.78; standard deviation: 1.18	Sample size: 941; possible range: 1 (minimum) - 7 (maximum); actual range: 1.33 (minimum) - 7 (maximum); mean: 5.82; standard deviation: 1.22	

Variable Notes: Parents and Staff score is the mean of the following items:

38. Provisions for parents

39. Provisions for personal needs of staff

40. Provisions for professional needs of staff

Higher scores indicate higher quality provisions for parents and staff.

35.E. ECERS-R Personal Care Routines Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC2_AVE	T4ECRPSL	
Variable Label			ECERS Personal Care Routines Average Score	PreK: ECERS-R Personal Care	
Source Variables			ECERS-R items 9, 10, 11, 12, 13, and 14	ECERS-R items 9, 10, 11, 12, 13, and 14	
EHSREP Study Psychometrics			Sample size: 487; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.81; standard deviation: 1.59	Sample size: 954; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.33; standard deviation: 1.49	

Variable Notes: Personal Care score is the mean of the following items:

9. Greeting/departing

10. Meals/snacks

11. Nap/rest

12. Toileting/diapering

13. Health practices

14. Safety practices

Higher scores indicate higher quality personal care provisions/practices.

35.F. ECERS-R Program Structure Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC6_AVE	T4ECRPRO	
Variable Label			ECERS Program Structure Average Score	PreK: ECERS-R Program Structure	
Source Variables			ECERS-R items 34, 35, and 36	ECERS-R items 34, 35, and 36	
EHSREP Study Psychometrics			Sample size: 483; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.20; standard deviation: 1.61	Sample size: 975; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.56; standard deviation: 1.55	

Variable Notes: Program Structure score is the mean of the following items:

34. Schedule
35. Free play
36. Group time

Higher scores indicate higher quality program structure components.

35.G. ECERS-R Space and Furnishings Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4ECRFUR	
Variable Label				PreK: ECERS-R Space and Furnishings	
Source Variables				ECERS-R items 1, 2, 3, 4, 5, 6, 7, and 8	
EHSREP Study Psychometrics				Sample size: 980; possible range: 1 (minimum) - 7 (maximum); actual range: 1.25 (minimum) - 7 (maximum); mean: 5.39; standard deviation: 1.10	

Variable Notes: Space and Furnishing score is the mean of the following items:

1.   Indoor space
2.   Furniture for routine care, play and learning
3.   Furnishings for relaxation and comfort
4.   Room arrangement for play
5.   Space for privacy
6.   Child-related display
7.   Space for gross motor play
8.   Gross motor equipment

Higher scores indicate higher quality space and furnishings.

35.H. ECERS-R Total Scale Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ECER_AVE	T4ECRTTL	
Variable Label			Overall ECERS Average Score	PreK: ECERS-R Total Scale Mean Score	
Source Variables			ECERS-R items 1 through 36, 38, 39, and 40	ECERS-R items 1 through 36, 38, 39, and 40	
EHSREP Study Psychometrics			Sample size: 489; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.78; standard deviation: 1.23	Sample size: 984; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.25; standard deviation: 1.14	

Variable Notes: Total ECERS-R score is the mean of items 1 through 36, 38, 39, and 40. Higher scores indicate higher classroom quality.

35.I. ECERS-R Creative Mean Score, FACES

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FECCRE	
Variable Label				PreK: FACES ECERS-R Creative	
Source Variables				ECERS-R items 6, 20, 21, 22, 23 and 24	
EHSREP Study Psychometrics				Sample size: 986; possible range: 1 (minimum) - 7 (maximum); actual range: 1.33 (minimum) - 7 (maximum); mean: 4.62; standard deviation: 1.25	

Variable Notes: Creative score (FACES) is the mean of the following items:

6.   Child-related display

20. Art

21. Music/movement

22. Blocks

23. Sand/water

24. Dramatic play

Higher scores indicate higher quality creative opportunities in the classroom.

35.J. ECERS-R Furnishings Mean Score, FACES

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave			X	X	
Variable Name			ESC1_AVE	T4FECFUR	
Variable Label			ECERS Furnishings Average Score	PreK: FACES ECERS-R Furnishings	
Source Variables			ECERS-R items 1, 2, 3, and 4	ECERS-R items 1, 2, 3, and 4	
EHSREP Study Psychometrics			Sample size: 488; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.01; standard deviation: 1.26	Sample size: 976; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.81; standard deviation: 1.13	

Variable Notes: Furnishing score (FACES) is the mean of the following items:

1. Indoor space
2. Furniture for routine care, play and learning
3. Furnishings for relaxation and comfort
4. Room arrangement for play

Higher scores indicate higher quality furnishings.

35.K. ECERS-R Motor Skills Mean Score, FACES

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FECMOT	
Variable Label				PreK: FACES ECERS-R Motor Skills	
Source Variables				ECERS-R items 7, 8, 19, and 29	
EHSREP Study Psychometrics				Sample size: 919; possible range: 1 (minimum) - 7 (maximum); actual range: 1.25 (minimum) - 7 (maximum); mean: 5.19; standard deviation: 1.40	

Variable Notes: Motor Skills score (FACES) is the mean of the following items:

7.   Space for gross motor play

8.   Gross motor equipment

19.   Fine motor

29.   Supervision of gross motor activities

Higher scores indicate higher quality opportunities for motor skill development.

35.L. ECERS-R Program Structure Mean Score, FACES

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FECPRO	
Variable Label				PreK: FACES ECERS-R Program Structure	
Source Variables				ECERS-R items 5, 34, 35, and 36	
EHSREP Study Psychometrics				Sample size: 974; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.55; standard deviation: 1.45	

Variable Notes: Program Structure score is the mean of the following items:

5.   Space for privacy

34. Schedule

35. Free play

36. Group time

Higher scores indicate higher quality program structure.

35.M. ECERS-R Social Mean Score, FACES

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FECSOC	
Variable Label				PreK: FACES ECERS-R Social	
Source Variables				ECERS-R items 30, 31, 32, and 33	
EHSREP Study Psychometrics				Sample size: 968; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.67; standard deviation: 1.59	

Variable Notes: Social score (FACES) is the mean of the following items:

30. General supervision of children

31. Discipline

32. Staff-child interactions

33. Interactions among children

Higher scores indicate higher quality social support.

36. Measure Name: Family Day Care Rating Scale (FDCRS)

Citation: Reprinted by permission of publisher from Harms, T., & Clifford, R.M., FAMILY DAY CARE RATING SCALE (FDCRS) SCORING SHEETS (New York: Teachers College Press, (c) 1989 by Teachers College, Columbia University. All rights reserved.)

Publisher Psychometrics: Median interrater reliability coefficients across items of 0.83 or more. Internal consistency alphas across subscales ranged from 0.70 to 0.93 (Howes, C., & Stewart, P. (1987). Child's play with adults, toys and peers: An examination of family and child care influences. *Developmental Psychology*, 23, 423-430.)

Publisher Permission: Granted permission to release data but not the instruments. Any user of data can purchase an instrument from the publisher. Individual source items are not available in documentation, but are available in restricted use files (labeled with FDCRS item number).

Measure Notes: FDCRS captures information on the quality of home-based early care settings. Consists of 32 items that are organized under six categories: space and furnishings for care and learning; basic care; language and reasoning; learning activities; social development; and adult needs. Each item is scored on a 7-point scale that ranges from 1=inadequate, 3=minimal, 5=good, to 7=excellent care.

36.A. FDCRS Adult Needs Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FDCADL	
Variable Label				PreK: Family Day Care Rating Scale (FDCRS) Adult Needs	
Source Variables				FDCRS items 30 and 31	
EHSREP Study Psychometrics				Sample size: 70; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.75; standard deviation: 1.73	

Variable Notes: Adult Needs is the mean of the following items:

30. Relationship with parents

31. Balancing personal and caregiving responsibilities

Higher scores indicate higher quality adult needs.

36.B. FDCRS Basic Care Scale Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FDCBCA	
Variable Label				PreK: Family Day Care Rating Scale (FDCRS) Basic Care	
Source Variables				FDCRS items 7, 8, 9, 10, 11, 12, and 13	
EHSREP Study Psychometrics				Sample size: 68; possible range: 1 (minimum) - 7 (maximum); actual range: 1.43 (minimum) - 6.86 (maximum); mean: 4.02; standard deviation: 1.62	

Variable Notes: Basic Care is the mean of the following items:

7b. Arriving/leaving

8b. Meals/snacks

9b. Nap/rest

10b. Diapering/toileting

11b. Personal grooming

12b. Health

13b. Safety

Higher scores indicate higher quality basic care provisions.

36.C. FDCRS Language Reasoning Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FDCLAN	
Variable Label				PreK: Family Day Care Rating Scale (FDCRS) Language Reasoning	
Source Variables				FDCRS items 14b, 15b, 16, 17	
EHSREP Study Psychometrics				Sample size: 71; possible range: 1 (minimum) - 7 (maximum); actual range: 1.17 (minimum) - 7 (maximum); mean: 4.26; standard deviation: 1.55	

Variable Notes: Language Reasoning is the mean of the following items:

14b. Informal use of language

15b. Helping children understand language

16.   Helping children use language

17.   Helping children reason (using concepts)

Higher scores indicate higher quality caregiver provided language reasoning.

36.D. FDCRS Learning Activities Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FDCLRN	
Variable Label				PreK: Family Day Care Rating Scale (FDCRS) Learning Activities	
Source Variables				FDCRS items 18, 19, 20, 21, 22, 23, 24, 25, and 26	
EHSREP Study Psychometrics				Sample size: 72; possible range: 1 (minimum) - 7 (maximum); actual range: 1.11 (minimum) - 6.56 (maximum); mean: 3.77; standard deviation: 1.53	

Variable Notes: Learning Activities is the mean of the following items:

18. Eye-hand coordination
19. Art
20. Music and movement
21. Sand and water play
22. Dramatic play
23. Blocks
24. Use of TV
25. Schedule of daily activities
26. Supervision of play indoors and outdoors

Higher scores indicate higher quality learning activities.

36.E. FDCRS Social Development Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FDCSOC	
Variable Label				PreK: Family Day Care Rating Scale (FDCRS) Social Development	
Source Variables				FDCRS items 27, 28, and 29	
EHSREP Study Psychometrics				Sample size: 71; possible range: 1 (minimum) - 7 (maximum); actual range: 1.67 (minimum) - 7 (maximum); mean: 4.31; standard deviation: 1.26	

Variable Notes:　Social Development is the mean of the following items:

27. Tone

28. Discipline

29. Cultural awareness

Higher scores indicate higher quality caregiver provided social development.

36.F. FDCRS Space and Furnishing Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4FDCFUR	
Variable Label				PreK: Family Day Care Rating Scale (FDCRS) Space and Furnishing	
Source Variables				FDCRS items 1, 2, 3, 4, 5, 6b	
EHSREP Study Psychometrics				Sample size: 72; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 6.86 (maximum); mean: 3.94; standard deviation: 1.40	

Variable Notes: Space and Furnishings is the mean of the following items:

1.   Furniture for routine care and learning
2.   Furnishings for relaxation and comfort
3.   Child-related display
4.   Indoor space arrangement
5.   Active physical play
6b. Space to be alone

Higher scores indicate higher quality space and furnishings.

36.G. FDCRS Total Mean Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X	X	X	
Variable Name	FDCR_14	FDCR_24	FDCR_36	T4FDCTTL	
Variable Label	Overall FDCRS Average Score	Overall FDCRS Average Score	Overall FDCRS Average Score	PreK: Family Day Care Rating Scale (FDCRS) Total Scale Mean Score	
Source Variables	FDCRS items 1 through 31.	FDCRS items 1 through 31.	FDCRS items 1 through 31.	FDCRS items 1 through 31.	
EHSREP Study Psychometrics	Sample size: 143; possible range: 1 (minimum) - 7 (maximum); actual range: 1.03 (minimum) - 6.64 (maximum); mean: 3.32; standard deviation: 1.03	Sample size: 141; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 3.56; standard deviation: 1.36	Sample size: 107; possible range: 1 (minimum) - 7 (maximum); actual range: 1.20 (minimum) - 6.61 (maximum); mean: 3.71; standard deviation: 1.22	Sample size: 72; possible range: 1 (minimum) - 7 (maximum); actual range: 1.39 (minimum) - 6.50 (maximum); mean: 4.06; standard deviation: 1.36	

Variable Notes: The Overall FDCRS score is the mean of items 1 through 31 (note, the 14 and 24 Month waves use items 6a, 14a, and 15a while the 36 month and Pre-K waves use 6b, 14b, and 15b). Higher scores indicate higher quality of care.

37. Measure Name: Howes Peer Play Scale

Citation: The measure was created for EHSREP by Carollee Howes and adapted from the following sources:

Howes, C. Peer play scale as an index of complexity of peer interaction. *Developmental Psychology*, 16, 1980, pp. 371-372.

Ladd, G.W., Birch, S.H. & Buhs, E.S. (1999). Children's social and scholastic lives in kindergarten related spheres of influence. Child Development, 70.

Publisher Psychometrics:

Publisher Permission: Granted permission to include items in data file and documentation. Items are included on restricted use files.

Measure Notes: Carollee Howes designed this measure of child social skill and emotional tone to be gathered during the child care assessment visit. The observer used four code and rating sheets per child. Each code sheet included 15 coding intervals to be completed every 20 seconds. Categories included social play codes which identified who the child was playing with and the type of play and peer content codes which indicated the content level of peer play. Overall quality ratings were completed at the end of each 5-minute interval. These ratings included child behavior ratings, teacher-child relationship ratings, and teacher behavior ratings.

37.A. Emotional Tone

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_t_em	
Variable Label				PreK: Howes emotional tone with teacher	
Source Variables					
EHSREP Study Psychometrics				Sample size: 829; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.11; standard deviation: 0.99	

Variable Notes: This rating reflects the teacher's behavior. It is coded at the end of each 5-minute cycle. It aims to capture the "feeling tone" that seems dominant or typical of the interactions that occur between the teacher and the target child.

1=Very Positive: very warm, nurturing

2=Positive: agreeable, harmonious

3=Neutral: even-toned, nonchalant, perfunctory

4=Negative: disagreeable, disapproving

5=Very Negative: antagonistic, oppositional, angry

Reverse code items before taking average score across four cycles. Scores can range from 1 to 5 with higher scores indicating very warm and nurturing feeling tone between the teacher and target child.

37.B. Aggressive Composite

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_LC_aggr	
Variable Label				PreK: Howes Ladd aggressive composite	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,073; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 4.75 (maximum); mean: 2.10; standard deviation: 1.30	

Variable Notes: This rating reflects the quality of the child's behavior within the classroom setting. It is coded at the end of each 5-minute cycle. It aims to capture if the target child is verbally or physically aggressive towards peers.

A score of 1 indicates that the behavior is very characteristic of the child, a score of 3 indicates that the behavior is somewhat characteristic of the child, and a score of 5 indicates that the behavior is not very characteristic of the child during the 5-minute observation.

Reverse code items before taking average score across four cycles. Scores can range from 1 to 5 with higher scores indicating that aggressive behaviors are very characteristic of the target child.

37.C. Anxious Composite

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_LC_anx	
Variable Label				PreK: Howes Ladd anxious composite	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,073; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 4.75 (maximum); mean: 1.86; standard deviation: 0.95	

Variable Notes: This rating reflects the quality of the child's behavior within the classroom setting. It is coded at the end of each 5-minute cycle. It aims to capture if the child's behavior is tense, anxious, and/or fearful.

A score of 1 indicates that the behavior is very characteristic of the child, a score of 3 indicates that the behavior is somewhat characteristic of the child, and a score of 5 indicates that the behavior is not very characteristic of the child during the 5-minute observation.

Reverse code items before taking average score across four cycles. Scores can range from 1 to 5 with higher scores indicating that anxious behaviors are very characteristic of the target child.

37.D. Conflict with Teacher

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_L_T_con	
Variable Label				PreK: Howes Ladd conflict with teacher rating	
Source Variables				.	
EHSREP Study Psychometrics				Sample size: 826; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 1.65; standard deviation: 1.29	

Variable Notes: This refers to the nature of the relationship between the teacher and child. It is coded at the end of each 5-minute cycle. It aims to capture if the relationship is primarily negative in tone, tense, or conflictual; if the target child and the teacher seem to be struggling with each other; if the teacher-child interactions are negative in tone and seem to leave the teacher and the target child frustrated and/or upset; if their interactions seem to drain the teacher and the target child of energy.

A score of 1 indicates that the behavior is very characteristic of the child, a score of 3 indicates that the behavior is somewhat characteristic of the child, and a score of 5 indicates that the behavior is not very characteristic of the child during the 5-minute observation.

Reverse code items before taking average score across four cycles. Scores can range from 1 to 5 with higher scores indicating that the relationship between the teacher and target child is primarily negative.

37.E. Intimate with Teacher

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_L_T_int	
Variable Label				PreK: Howes Ladd intimate with teacher rating	
Source Variables					
EHSREP Study Psychometrics				Sample size: 828; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) -5 (maximum); mean: 2.64; standard deviation: 1.28	

Variable Notes: This refers to the bond between the teacher and the child. It is coded at the end of each 5-minute cycle. It aims to capture if the teacher and child seem to share a strong emotional bond; if the target child and the teacher are affectionate and their interactions reflect a warm emotional tone; if the target child seeks comfort from teacher when upset and the teacher makes herself available to comfort the target child when he/she is upset; if the target child spontaneously shares information about him/herself with teacher.

A score of 1 indicates that the behavior is very characteristic of the child, a score of 3 indicates that the behavior is somewhat characteristic of the child, and a score of 5 indicates that the behavior is not very characteristic of the child during the five minute observation.

Take the average score across four cycles. Scores can range from 1 to 5 with higher scores indicating that the target child does not have an intimate relationship with the teacher.

37.F. Prosocial with Peers

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_LCproso	
Variable Label				PreK: Howes Ladd prosocial with peer rating	
Source Variables					
EHSREP Study Psychometrics				Sample size: 1,073; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 2.94; standard deviation: 1.18	

Variable Notes: This rating reflects the quality of the child's behavior within the classroom setting. It is coded at the end of each 5-minute cycle. It aims to capture the degree to which target child's interactions with peers is cooperative, friendly, and carried out in a skillful manner.

A score of 1 indicates that the behavior is very characteristic of the child, a score of 3 indicates that the behavior is somewhat characteristic of the child, and a score of 5 indicates that the behavior is not very characteristic of the child during the five minute observation.

Reverse code items before taking average score across four cycles. Scores can range from 1 to 5 with higher scores indicating that positive interactions with peers are very characteristic of the target child.

37.G. Teacher Involved with Child

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				C4H_t_inv	
Variable Label				PreK: Howes teacher involved with child	
Source Variables					
EHSREP Study Psychometrics				Sample size: 829; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 2.99; standard deviation: 1.08	

Variable Notes: This rating reflects the teacher's behavior. It is coded at the end of each 5-minute cycle and aims to capture the level of involvement the teacher has with the target child, regardless of tone, relative to other children in the classroom.

1=High: frequent interaction, high percentage of teacher's time spent interacting with target child relative to other children

3=Medium: moderately engaged, average amount of teacher's time spent interacting with target child relative to other children

5=Low: disengaged, very small percentage of teacher's time spent interacting with target child relative to other children

Reverse code items before taking average score across four cycles. Scores can range from 1 to 5 with higher scores indicating more frequent interaction between the teacher and target child.

38. Measure Name: The Infant/Toddler Environment Rating Scale (ITERS)

Citation: Reprinted by permission of publisher from Harms, T., Cryer, D., & Clifford, R.M., INFANT/TODDLER ENVIRONMENT RATING SCALE (ITERS) SCORING SHEETS (New York: Teachers College Press, (c) 1990 by Teachers College, Columbia University. All rights reserved.)

Publisher Psychometrics: Spearman's correlation coefficient for interrater reliability = 0.84, overall and subscales ranged from 0.58 to 0.89. Internal consistency reliability = 0.83, overall. Spearman's correlation coefficient for test-rest reliability (3 to 4 week interval) = 9.79, overall and subscales ranged from 0.58 to 0.76.

Publisher Permission: Granted permission to release data but not the instruments. Any user of data can purchase an instrument from the publisher. Individual source items are not available in documentation, but are available in restricted use files (labeled with ITERS item numbers).

Measure Notes: The Infant/Toddler Environment Rating Scale (ITERS) assesses the quality of center-based child care programs for infants and toddlers (up to 30 months). It is a 35-item scale organized under seven categories: furnishings and display for children, personal care routines, listening and talking, learning activities, interactions, program structure, and adult needs. Each item is scored on a 7-point scale that ranges from 1=inadequate, 3=minimal, 5=good, to 7=excellent care.

38.A. ITERS Furnishings Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC1_14	ISC1_24			
Variable Label	ITERS Furnishings Average Score	ITERS Furnishings Average Score			
Source Variables	ITERS items 1, 2, 3, 4, 5	ITERS items 1, 2, 3, 4, 5			
EHSREP Study Psychometrics	Sample size: 363; possible range: 1 (minimum) - 7 (maximum); actual range: 1.80 (minimum) - 7 (maximum); mean: 4.44; standard deviation: 1.21	Sample size: 405; possible range: 1 (minimum) - 7 (maximum); actual range: 1.40 (minimum) - 7 (maximum); mean: 4.81; standard deviation: 1.25			

Variable Notes: Furnishing Score is the mean of the following items:

1. Furnishings for routine care (feeding and sleeping, storage of child's possessions)
2. Use of furnishings for learning activities
3. Furnishings for relaxation and comfort
4. Room arrangement
5. Display for children

Higher scores indicate higher quality furnishings and displays for children.

38.B. ITERS Personal Care Routines Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC2_14	ISC2_24			
Variable Label	ITERS Personal Care Routines Average Score	ITERS Personal Care Routines Average Score			
Source Variables	ITERS items 6, 7, 8, 9, 10, 11, 12, 13, 14	ITERS items 6, 7, 8, 9, 10, 11, 12, 13, 14			
EHSREP Study Psychometrics	Sample size: 365; possible range: 1 (minimum) - 7 (maximum); actual range: 1.33 (minimum) - 7 (maximum); mean: 4.57; standard deviation: 1.43	Sample size: 405; possible range: 1 (minimum) - 7 (maximum); actual range: 1.22 (minimum) - 7 (maximum); mean: 4.85; standard deviation: 1.40			

Variable Notes: Personal Care Routines is the mean of the following items:

7. Greeting/departing
8. Meals/Snacks
9. Nap
10. Diapering/toileting
11. Personal grooming
12. Health practice
13. Health policy
14. Safety practice
15. Safety policy

Higher scores indicate higher quality personal care routines available for children.

38.C. ITERS Listening and Talking Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC3_14	ISC3_24			
Variable Label	ITERS Listening and Talking Average Score	ITERS Listening and Talking Average Score			
Source Variables	ITERS items 15, 16	ITERS items 15, 16			
EHSREP Study Psychometrics	Sample size: 360; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.59; standard deviation: 1.69	Sample size: 404; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.02; standard deviation: 1.80			

Variable Notes: Listening and Talking is the mean of the following items:

15. Informal use of language

16. Books and pictures

Higher scores indicate higher quality listening and talking supports for children.

38.D. ITERS Learning Activities Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC4_14	ISC4_24			
Variable Label	ITERS Learning Activities Average Score	ITERS Learning Activities Average Score			
Source Variables	ITERS items 17, 18, 19, 20, 21, 22, 23, 24	ITERS items 17, 18, 19, 20, 21, 22, 23, 24			
EHSREP Study Psychometrics	Sample size: 367; possible range: 1 (minimum) - 7 (maximum); actual range: 1.13 (minimum) - 7 (maximum); mean: 3.97; standard deviation: 1.32	Sample size: 404; possible range: 1 (minimum) - 7 (maximum); actual range: 1.38 (minimum) - 7 (maximum); mean: 4.26; standard deviation: 1.22			

Variable Notes: Learning Activities is the mean of the following items:

17. Eye-hand coordination

18. Active physical play

19. Art

20. Music and movement

21. Blocks

22. Pretend play

23. Sand and water play

24. Cultural awareness

Higher scores indicate higher quality learning activities.

38.E. ITERS Interactions Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC5_14	ISC5_24			
Variable Label	ITERS Interactions Average Score	ITERS Interactions Average Score			
Source Variables	ITERS items 25, 26, 27	ITERS items 25, 26, 27			
EHSREP Study Psychometrics	Sample size: 363; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.22; standard deviation: 1.55	Sample size: 401; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.11; standard deviation: 1.66			

Variable Notes: Interactions is the mean of the following items:

25. Peer interaction

26. Caregiver-child interaction

27. Discipline

Higher scores indicate higher quality interactions for children.

38.F. ITERS Program Structure Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC6_14	ISC6_24			
Variable Label	ITERS Program Structure Average Score	ITERS Program Structure Average Score			
Source Variables	ITERS items 28, 29, 30, 31	ITERS items 28, 29, 30, 31			
EHSREP Study Psychometrics	Sample size: 344; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.92; standard deviation: 1.63	Sample size: 369; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 5.03; standard deviation: 1.60			

Variable Notes: Program Structure is the mean of the following items:

28. Schedule of daily activities

29. Supervision of daily activities

30. Staff cooperation

31. Provisions for exceptional children

Higher scores indicate higher quality program structure.

38.G. ITERS Adult Needs Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ISC7_14	ISC7_24			
Variable Label	ITERS Adult Needs Average Score	ITERS Adult Needs Average Score			
Source Variables	ITERS items 32, 33, 34, 35	ITERS items 32, 35			
EHSREP Study Psychometrics	Sample size: 270; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.06; standard deviation: 1.95	Sample size: 400; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 3.99; standard deviation: 1.88			

Variable Notes: Adult Needs is the mean of the following items:

32. Adult personal needs

35. Provisions for parents

Higher scores indicate higher quality supports for adult needs.

38.H. Overall ITERS Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave	X	X			
Variable Name	ITER14	ITER24			
Variable Label	Overall ITERS Average Score	Overall ITERS Average Score			
Source Variables	ITERS items 1 through 32, 35.	ITERS items 1 through 32, 35.			
EHSREP Study Psychometrics	Sample size: 365; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.48; standard deviation: 1.24	Sample size: 405; possible range: 1 (minimum) - 7 (maximum); actual range: 1 (minimum) - 7 (maximum); mean: 4.71; standard deviation: 1.23			

Variable Notes: The Overall ITERS score is the mean of items 1 through 32 and 35. Higher scores indicate higher quality of care.

Child Interview Measures, Child (Self)

39. Measure Name: Peer Bullying, PSID

Citation: Panel Study of Income Dynamics - Child Development Supplement (PSID-CDS2). Panel Study of Income Dynamics, public use dataset. Produced and distributed by the Institute for Social Research, Survey Research Center, University of Michigan, Ann Arbor, MI (2013).

Loeber, R., Stouthamer-Loeber, M., Van Kammen, W.B., & Farrington, D.P. (1989). Development of a new measure of self-reported antisocial behavior for young children: Prevalence and reliability. In M.W. Klein (Ed.), Cross-national research in self-reported crime and delinquency (pp. 203-225). Dordrecht, The Netherlands: Kluwer Academic Publishers.

Publisher Psychometrics: PSID-CDS2: Alpha coefficient = 0.62. Factor loadings range = 0.42-0.66.

Publisher Permission: Not applicable. Individual source items are available in documentation and restricted use files.

Measure Notes: The 4-item PSID-CDS2 bullying scale asks children to report how often they have been bullied by peers in their school or neighborhood in the past month using a 4-point scale: 1=never, 2=once or twice, 3=a few times, or 4=many times.

39.A. Peer Bullying Scale PSID

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5_BULLY
Variable Label					C5: Sum Peer Bullying Scale PSID
Source Variables					C5S16_1 through C5S16_4
EHSREP Study Psychometrics					Sample size: 1,547; possible range: 4 (minimum) - 16 (maximum); actual range: 4 (minimum) - 16 (maximum); mean: 6.78; standard deviation: 2.69; internal consistency reliability: 0.70 (all); 0.72 (White); 0.69 (African American); 0.67 (Hispanic)

Variable Notes: The Peer Bulling Scale is created by summing items C5S16_1 through C5S16_4. If any of the items are missing C5_BULLY is set to missing. Scores can range from 4 to 16 with higher scores indicating the child is a more frequent victim of peer bullying.

40. Measure Name: Pubertal Development Scale

Citation: Petersen, A. C., Crockett, L., Richards, M., & Boxer, A. (1988). A self-report measure of pubertal status: Reliability, validity, and initial norms. *Journal of Youth and Adolescence*, 17, 117-133.

Publisher Psychometrics: Petersen et al., 1988: Administered to two cohorts of 6th graders five times over eight years (n = 253; primarily White, middle class). Boys: alpha coefficient range = 0.72-0.78. Girls: alpha coefficient range = 0.76-0.83.

Publisher Permission: Not applicable. Individual item is available in documentation and restricted use files.

Measure Notes: In a single question, children were asked how early or late they experienced changes to their body compared to peers: much earlier (1), somewhat earlier (2), about the same (3), somewhat later (4), or much later (5) than most boys/girls their age.

40.A. Changes in the Child's Body

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					Only single item; no constructed variable
Variable Label					N/A
Source Variables					C5S23
EHSREP Study Psychometrics					

Variable Notes: Scores can range from 1 to 5 with higher scores indicating later maturation.

41. Measure Name: Risky Behaviors

Citation: Loeber, R., S. M. Green, B.B. Lahey, and M. Stouthamer-Loeber. "Optimal informants on childhood disruptive behaviors." *Development and Psychopathology*, vol. 1, 1989, pp. 317–337.

Publisher Psychometrics:

Publisher Permission: Not applicable. Individual source items are available in documentation and restricted use files.

Measure Notes: Items were drawn from Loeber et al. 1989, the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development, or created for EHSREP. Children were asked if they had ever, 1=yes or 0=no committed each of a series of delinquent behaviors. For example, "Taken or stolen something from a store without paying for it" and "Cheated on a school test."

41.A. Child Reported Delinquent Behaviors

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5_DELB
Variable Label					C5: Child Rpt - Delinquent Behaviors
Source Variables					C5S15_1a through C5S15_1j, C5S15_1l, C5S15_1n, C5S15_1p, C5S15_1q
EHSREP Study Psychometrics					Sample size: 1,551; possible range: 0 (minimum) - 14 (maximum); actual range: 0 (minimum) - 11 (maximum); mean: 1.51; standard deviation: 1.79; internal consistency reliability: 0.66 (all); 0.68 (White); 0.65 (African American); 0.65 (Hispanic)

Variable Notes: Score is the sum of items C5S15_1a through C5S15_1j, C5S15_1l, C5S15_1n, C5S15_1p, C5S15_1q. If more than three items are missing then C5_DELB is set to missing. If three items or less are missing then substitute the mean of non-missing items.

Child Interview Measures, Parent

42. Measure Name: Parental Supervision: Parental Monitoring

Citation: Stattin, H., and M. Kerr. "Parental Monitoring: A Reinterpretation." *Child Development*, vol. 71, 2000, pp. 1072-1085.

Publisher Psychometrics: Parental Monitoring: child-report items, alpha = 0.86; test-retest reliability, n = 36, r = 0.83

Publisher Permission: Not applicable. Individual source items are available in documentation and restricted use files.

Measure Notes: A 3-item child reported measure of parental supervision: parent knows what child is doing during free time; parent knows who child has as friends during free time, and parent knows what child spends money on. Child rates each item on a 4-point scale: 4=always or almost always, 3=a lot of the time, 2=some of the time, 1=or almost never or never.

42.A. Parental Monitoring/Supervision Scale - Child Report

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5_MTR
Variable Label					Parental Monitoring Scale – Child Report
Source Variables					C5S10A, C5S10B, C5S10C
EHSREP Study Psychometrics					Sample size: 1,545; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 3.20; standard deviation: 0.65; internal consistency reliability: 0.54 (all); 0.52 (White); 0.52 (African American); 0.56 (Hispanic)

Variable Notes: Scale score is the mean of the three items: C5S10A C5S10B C5S10C. If any of the three are missing, C5_MTR is set to missing. Higher scores indicate greater child report of parental supervision.

43. Measure Name: Self-Description Questionnaire I (SDQ-I)

Citation: Marsh, H.W. "Self-Description Questionnaire I." SELF Research Centre, University of Western Sydney, 1990.

ECLS-K SDQ; Tourangeau, K., Nord, C., Lê T., Pollack, J.M., and Atkins-Burnett, S. (2006). Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), Combined User's Manual for the ECLS-K Fifth-Grade Data Files and Electronic Codebooks (NCES 2006-032). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

"Mathematica Policy Research (MPR) will have the right to use the items that constitute the SDQ-I in the Early Head Start Fifth-Grade Follow-Up Study. MPR shall not offer such rights to any other person(s) or entity(ties) for any other purpose. Except as provided by this agreement, all rights in and to all items existing from test instruments will be retained by the copyright holder of those instruments."

Publisher Psychometrics: Marsh, Smith, Barnes, & Butler, 1983: Sample of poor or working-class 5th-6th graders in inner-city Sydney, Australia (n=528). Alpha coefficient = 0.79. Test-retest stability over 6-month period = 0.55. Discriminant validity supported by stronger correlations between child test scores and SDQ1 academic scales than with non-academic scales.

Publisher Permission: Granted permission to include scores but not items in data file and documentation. Individual source items are available in documentation and restricted use files.

Measure Notes: EHSREP used the SDQ that was used in the ECLS-K. This measure provided information about the children's perceptions of their own academic and social competencies and problem behaviors as well as their relationship with their parents. Children rated 28 items on a 4-point scale: 1=not at all true, 2=a little bit true, 3=mostly true, or 4=very true.

43.A. SDQ Anger/Distractibility Subscale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5C_ANGR
Variable Label					SDQ Anger/Distractibility Subscale
Source Variables					C5S15c, C5S15e, C5S15h, C5S15k, C5S15s, C5S15t
EHSREP Study Psychometrics					Sample size: 1,555; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 2.12; standard deviation: 0.75. internal consistency reliability: 0.78 (all); 0.79 (White); 0.76 (African American); 0.80 (Hispanic)

Variable Notes: Score is the mean of six items: C5S15c, C5S15e, C5S15h, C5S15k, C5S15s, and C5S15t. If more than 25 percent of the items are missing, C5C_ANGR is set to missing. Scores can range from 1 to 4, with higher scores indicating higher report of anger/distractibility.

43.B. SDQ Peer Relations Subscale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5C_PEER
Variable Label					SDQ Peer Relations Subscale
Source Variables					C5S15a, C5S15f, C5S15i, C5S15l, C5S15n, C5S15p
EHSREP Study Psychometrics					Sample size: 1,551; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 3.12; standard deviation: 0.63. internal consistency reliability: 0.79 (all); 0.82 (White); 0.76 (African American); 0.80 (Hispanic)

Variable Notes: Score is the mean of six items: C5S15a, C5S15f, C5S15i, C5S15l, C5S15n, C5S15p. If more than 25 percent of the items are missing, C5C_PEER is set to missing. Scores can range from 1 to 4, with higher scores indicating more positive peer relations.

43.C. Child Report - Relationship with Dad

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5_frel
Variable Label					C5: Child Rpt - Relationship with Dad
Source Variables					C5S13a through C5S13h, C5S13_1a through C5S13_1h
EHSREP Study Psychometrics					Sample size: 921; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 3.48; standard deviation: 0.56; internal consistency reliability: 0.88 (all); 0.86 (White); 0.88 (African American); 0.88 (Hispanic)

Variable Notes: Scores can range from 1 to 4, with higher scores indicating better relationships with their father.

If C5S07_1 = 1 (first caretaker) and C5S07_2 = 1, 2, 3, 4 (biological or birth father, stepfather, adoptive father, foster father), then C5_frel is the mean of items C5S13A through C5S13H;

If C5S09_1 = 1 (second caretaker) and C5S09_2 = 1, 2, 3, 4 (biological or birth father, stepfather, adoptive father, foster father), then C5_frel is the mean of items C5S13_1A through C5S13_1H;

If more than one item is missing, then C5_frel is missing.

43.D. Child Report - Relationship with Mom

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5_mrel
Variable Label					C5: Child Rpt - Relationship with Mom
Source Variables					C5S13a through C5S13h, C5S13_1a through C5S13_1h
EHSREP Study Psychometrics					Sample size: 1,438; possible range: 1 (minimum) - 4 (maximum); actual range: 1.38 (minimum) - 4 (maximum); mean: 3.58; standard deviation: 0.42; internal consistency reliability: 0.85 (all); 0.85 (White); 0.84 (African American); 0.86 (Hispanic)

Variable Notes: Scores can range from 1 to 4, with higher scores indicating better relationships with their mother.

If C5S07_1 = 2 (first caretaker) and C5S07_2 = 1, 2, 3, 4 (biological or birth mother, stepmother, adoptive mother, foster mother), then C5_mrel is the mean of the items C5S13A through C5S13H;

If C5S09_1 = 2 (second caretaker) and C5S09_2 = 1, 2, 3, 4 (biological or birth mother, stepmother, adoptive mother, foster mother), then C5_mrel is the mean of items C5S13_1A through C5S13_1H;

If more than one item is missing, then C5_mrel is missing.

43.E. SDQ Sad/Lonely/Anxious Subscale

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					C5C_SAD
Variable Label					SDQ Sad/Lonely/Anxious Subscale
Source Variables					C5S15b, C5S15d, C5S15g, C5S15j, C5S15m, C5S15o, C5S15r, C5S15u
EHSREP Study Psychometrics					Sample size: 1,554; possible range: 1 (minimum) - 4 (maximum); actual range: 1 (minimum) - 4 (maximum); mean: 2.29; standard deviation: 0.68. internal consistency reliability: 0.77 (all); 0.78 (White); 0.76 (African American); 0.75 (Hispanic)

Variable Notes: Score is the mean of eight items: C5S15b, C5S15d, C5S15g, C5S15j, C5S15m, C5S15o, C5S15r, C5S15u. If more than 25 percent of the items are missing, C5C_SAD is set to missing. Scores can range from 1 to 4, with higher scores indicating higher report of sad/lonely/anxious feelings.

Child Care Provider and Teacher Interview Measures

44. Measure Name: Achenbach System of Empirically-Based Assessment (ASEBA), Teacher Report Form (TRF)

Citation: Achenbach, Thomas M. and Leslie A. Rescorla. *Manual for the ASEBA Preschool Forms and Profiles.* Burlington, VT: University of Vermont Department of Psychiatry, 2000.

Publisher Psychometrics: Test-Retest Reliabilities of Scale Scores, n = 59: Aggressive Behavior, 8-Day $r = 0.89$; Withdrawn, 8-Day $r = 0.77$; Attention Deficit/Hyperactivity Problems, 8-Day $r = 0.79$.

Publisher Permission: Permission to include scores only. Individual source items are not available in documentation or restricted use files.

Measure Notes: The TRF is used to get the teacher's perception of a child's academic performance, adaptive functioning, and problem behaviors. Items are rated as 0=not true, 1=somewhat or sometimes true, and 2=very true or often true. It is a parallel form to the Child Behavior Checklist (CBCL) that is completed by the child's caretaker/parent.

44.A. TRF Aggressive Behavior

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4TRFAGG	
Variable Label				PreK: TRF aggressive behavior	
Source Variables				E2_c, E2_d, E2_f, E2_l	
EHSREP Study Psychometrics				Sample size: 1,042; possible range: 0 (minimum) - 8 (maximum); actual range: 0 (minimum) - 8 (maximum); mean: 1.75; standard deviation: 2.05; internal consistency reliability: 0.85	

Variable Notes: Items are recoded so that (1 = 0), (2 = 1), and (3 = 2). The score is the sum of the four recoded items. Scores can range from 0 to 8 with higher scores indicating that aggressive behavior is very true of the child.

44.B. TRF Classroom Conduct Total Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4TRFCLS	
Variable Label				PreK: TRF classroom conduct total score	
Source Variables				E2_a through E2_n	
EHSREP Study Psychometrics				Sample size: 1,043; possible range: 0 (minimum) - 28 (maximum); actual range: 0 (minimum) - 24 (maximum); mean: 5.32; standard deviation: 4.85; internal consistency reliability: 0.85	

Variable Notes: Items are recoded so that (1 = 0), (2 = 1), and (3 = 2). The score is the sum of the 14 recoded items. Scores can range from 0 to 28 with higher scores indicating that aggressive, withdrawn, and hyperactive behaviors are very true of the child.

44.C. TRF Classroom Conduct Withdrawn Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4TRFWIT	
Variable Label				PreK: TRF classroom conduct withdrawn	
Source Variables				E2_a, E2_e, E2_g, E2_h, E2_k, E2_m, E2_n	
EHSREP Study Psychometrics				Sample size: 1,044; possible range: 0 (minimum) - 14 (maximum); actual range: 0 (minimum) - 12 (maximum); mean: 2.33; standard deviation: 2.48; internal consistency reliability: 0.74	

Variable Notes: Items are recoded so that (1 = 0), (2 = 1), and (3 = 2). The score is the sum of the seven recoded items. Scores can range from 0 to 14 with higher scores indicating that withdrawn behavior is very true of the child.

44.D. TRF Hyperactive Behavior

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4TRFHYP	
Variable Label				PreK: TRF hyperactive behavior	
Source Variables				E2_b, E2_i, E2_j	
EHSREP Study Psychometrics				Sample size: 1,038; possible range: 0 (minimum) - 6 (maximum); actual range: 0 (minimum) - 6 (maximum); mean: 1.23; standard deviation: 1.52; internal consistency reliability: 0.72	

Variable Notes: Items are recoded so that (1 = 0), (2 = 1), and (3 = 2). The score is the sum of the three recoded items. Scores can range from 0 to 6 with higher scores indicating that hyperactive behavior is very true of the child.

45. Measure Name: FACES 1997 Teacher Child Ratings Drawn from the High/Scope Preschool Child Observation Record

Citation: High/Scope Educational Research Foundation. (1992). The High/Scope child observation record for ages 2 1/2-6. Ypsilanti, Mich: High/Scope Press.

Zill, Nicholas, Kim Kwang, Alberto Sorongon, Randy Herbison, Xtria Cheryl Clark. "Head Start Family and Child Experiences Survey: 1997 Data User's Guide." Report submitted to the United States Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation. Washington, DC: Westat, June 2005.

Publisher Psychometrics: Reliability coefficient for COR Total: 0.94, 0.91; Initiative, Social Relations: 0.82, 0.75; Creative Representation, Movement and Music: 0.79, 0.80; Language and Literacy: 0.85, 0.80; Mathematics and Science: 0.88, 0.75

Alpha coefficients are from studies conducted in spring 2002 and fall 2002. Head Start teaching staff of the Equal Opportunity Commission of St. Clair County Children's Services in Port Huron, Michigan, observed 160 children in spring 2002 and 233 children in fall 2002. Following the spring 2002 data collection, COR staff revised four items and made minor wording changes in other items and used the new version in the fall 2002 study.

Publisher Permission: Individual source items are not available in documentation or restricted use files.

Measure Notes: EHSREP used teacher ratings from FACES 1997 that were based on the High/Scope Preschool Child Observation Record (COR). Teachers were asked to rate a child's highest level of behavior observed in the past week for the following domains: cognitive, creative representation, music and movement, and social relationships. Each item is rated on a 5-point scale (from simple to complex) that represents typical development for that specific behavior. Fourteen items from the COR were used.

45.A. COR Cognitive

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CORCOG	
Variable Label				PreK: Child Observation Record (COR) Cognitive	
Source Variables				kcbf1, kcbf2, kcbj1, kcbj2	
EHSREP Study Psychometrics				Sample size: 964; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.68; standard deviation: 0.85	

Variable Notes: Score is the mean of four language/math skill items. Scores can range from 1 to 5 with higher scores indicating more complex child cognitive skills.

45.B. COR Creative Representation

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CORCRE	
Variable Label				PreK: Child Observation Record (COR) Creative Representation	
Source Variables				kcbh1, kcbh2, kcbh3	
EHSREP Study Psychometrics				Sample size: 973; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.95; standard deviation: 0.80	

Variable Notes: Score is the mean of three items: how well child uses creative materials for self-expression and making/building things; drawing and painting; and engaging in pretend play. Scores can range from 1 to 5 with higher scores indicating more complex child creative representation skills.

45.C. COR Music and Movement

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CORMUS	
Variable Label				PreK: Child Observation Record (COR) Music and Movement	
Source Variables				kcbi1, kcbi2, kcbi3, kcbi4	
EHSREP Study Psychometrics				Sample size: 978; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 4.08; standard deviation: 0.85	

Variable Notes: Score is the mean of four items: child's proficiency in imitating movements to a steady beat; following music and movement directions; body coordination; and manipulating small objects/performing precise actions. Scores can range from 1 to 5 with higher scores indicating more complex child music and movement skills.

45.D. COR Social Relationship

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CORSOC	
Variable Label				PreK: Child Observation Record (COR) Social Relationship	
Source Variables				kcbg1, kcbg2, kcbg3	
EHSREP Study Psychometrics				Sample size: 974; possible range: 1 (minimum) - 5 (maximum); actual range: 1 (minimum) - 5 (maximum); mean: 3.75; standard deviation: 0.96	

Variable Notes: Score is the mean of three items: how well the child makes friends; works with other children; and understands/expresses feelings. Scores can range from 1 to 5 with higher scores indicating more complex child social relationship skills.

45.E. COR Total Scale Mean

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4CORTTL	
Variable Label				PreK: Child Observation Record (COR) Total Scale Mean	
Source Variables				kcbf1, kcbf2, kcbg1, kcbg2, kcbg3, kcbh1, kcbh2, kcbh3, kcbi1, kcbi2, kcbi3, kcbi4, kcbj1, kcbj2	
EHSREP Study Psychometrics				Sample size: 988; possible range: 1 (minimum) - 5 (maximum); actual range: 1.21 (minimum) - 5 (maximum); mean: 3.86; standard deviation: 0.75	

Variable Notes: Score is the mean of 14 items. Scores can range from 1 to 5 with higher scores indicating more complex child cognitive, creative representation, music and movement, and social relationship skills.

46. Measure Name: Social Skills Rating System – Teacher Report

Citation: Gresham, F.M., and S.N. Elliott. Social Skills Rating Scale-SSRS. Circle Pines, MN: American Guidance Services, Inc., 1990.

Publisher Psychometrics: In national norming sample (N=4,170 children):

Teacher-reported Problem Behavior subscales alpha coefficients range = 0.82-0.86, test-retest reliability = 0.84.

Teacher-reported Social Skills subscales alpha coefficients range = 0.93-0.94, test-retest reliability = 0.85.

Publisher Permission: Granted permission to include scale scores on data file. Individual source items are available in documentation and restricted use files.

Measure Notes: Includes the Hyperactivity, Cooperation, and Self-Control Subscales from the Social Skills Rating System (SSRS) - Teacher Report. Asked of the teacher to gather information about the child's behavior in the school and in the classroom.

46.A. SSRS Cooperation Subscale Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					T5_SSRS_CO
Variable Label					T5: ssrs cooperation subscale average score
Source Variables					T5_B15 through T5_B24
EHSREP Study Psychometrics					Sample size: 833; possible range: 0 (minimum) - 2 (maximum); actual range: 0 (minimum) - 2 (maximum); mean: 1.42; standard deviation: 0.44

Variable Notes: Teachers rated child's behavior on a three point scale: 0=never; 1=sometimes; 2=often (if applicable) or very often.

The Cooperation Subscale score is the mean of teacher's rating of child's behavior (for example, follows directions, finishes school work, pays attention to instructions). For each child, the sum of the ratings on nine items was divided by the number of non-missing components. Scores can range from 0 to 2 with higher scores indicating that cooperation behaviors are often true of the child.

46.B. SSRS Externalizing Subscale Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					T5_SSRS_EX
Variable Label					T5: ssrs externalizing subscale average score
Source Variables					T5_B38 through T5_B43
EHSREP Study Psychometrics					Sample size: 831; possible range: 0 (minimum) - 2 (maximum); actual range: 0 (minimum) - 2 (maximum); mean: 0.43; standard deviation: 0.47

Variable Notes: Teachers rated child's behavior on a three point scale: 0=never; 1=sometimes; 2=often (if applicable) or very often.

The Externalizing Subscale score is the mean of teacher's rating of child's behavior (for example, fights, argues, easily gets angry). For each child, the sum of the ratings on six items was divided by the number of non-missing components.

Scores can range from 0 to 2 with higher scores indicating that externalizing behaviors are often true of the child.

46.C. SSRS Hyperactivity Subscale Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					T5_SSRS_HY
Variable Label					T5: ssrs hyperactivity subscale average score
Source Variables					T5_B32 through T5_B37
EHSREP Study Psychometrics					Sample size: 834; possible range: 0 (minimum) - 2 (maximum); actual range: 0 (minimum) - 2 (maximum); mean: 0.68; standard deviation: 0.54

Variable Notes: Teachers rated child's behavior on a three point scale: 0=never; 1=sometimes; 2=often (if applicable) or very often.

The Hyperactivity Subscale score is the mean of teacher's rating of child's behavior (for example, easily distracted, fidgets/moves too much). For each child, the sum of the ratings on six items was divided by the number of non-missing components. Scores can range from 0 to 2 with higher scores indicating that hyperactive behaviors are often true of the child. For each child, we divided the sum of these values by the number of non-missing components.

46.D. SSRS Self-Control Subscale Average Score

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave					X
Variable Name					T5_SSRS_SC
Variable Label					T5: ssrs self-control subscale average score
Source Variables					T5_B25 through T5_B31
EHSREP Study Psychometrics					Sample size: 794; possible range: 0 (minimum) - 2 (maximum); actual range: 0 (minimum) - 2 (maximum); mean: 1.46; standard deviation: 0.49

Variable Notes: Teachers rated child's behavior on a three point scale: 0=never; 1=sometimes; 2=often (if applicable) or very often.

The Self-Control Subscale score is the mean of teacher's rating of child's behavior (for example, controls temper, responds appropriately). For each child, the sum of the ratings on seven items was divided by the number of non-missing components. Scores can range from 0 to 2 with higher scores indicating that self-control behaviors are often true of the child.

47. Measure Name: Student-Teacher Relationship Scale (STRS)

Citation: Pianta, R. C. (1992). Student-Teacher Relationship Scale. Odessa, FL: Psychological Assessment Resources, Inc.

Publisher Psychometrics: Conflict alpha coefficient = 0.92. Closeness alpha coefficient = 0.86. Dependency alpha coefficient = 0.64. Total alpha coefficient = 0.89 (n =1,535).

Publisher Permission: Permission to include scale scores only. Individual source items are not available in documentation or restricted use files.

Measure Notes: This measure assesses teachers' perceptions of their relationship with a particular student. It measures student-teacher relationships in terms of conflict, closeness, dependency, and the overall quality. This measure contains 28 items rated on a 5-point scale in which 1=definitely does not apply and 5=definitely applies.

47.A. Teacher-Child Relationship Scale – Closeness

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4PIACLO	
Variable Label				PreK: Pianta Teacher Child Relationship Scale Closeness	
Source Variables				STRS items 1, 3, 4, 5, 7, 9, 12, 15, 21, 27, 28	
EHSREP Study Psychometrics				Sample size: 1,046; possible range: 11 (minimum) - 55 (maximum); actual range: 18 (minimum) - 55 (maximum); mean: 46.00; standard deviation: 6.48	

Variable Notes: This subscale measures the degree to which a teacher experiences affection, warmth, and open communication with a student. STRS item 4 is reverse coded. Score is sum of STRS items 1, 3, 4, 5, 7, 9, 12, 15, 21, 27, 28. Scores can range from 11 to 55 with higher scores indicating a warm relationship and that the teacher feels confident that the student uses him for support.

47.B. Teacher-Child Relationship Scale – Conflict

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4PIACON	
Variable Label				PreK: Pianta Teacher Child Relationship Scale Conflict	
Source Variables				STRS items 2, 11, 13, 16, 18, 19, 20, 22, 23, 24, 25, 26	
EHSREP Study Psychometrics				Sample size: 1,045; possible range: 12 (minimum) - 60 (maximum); actual range: 12 (minimum) - 59 (maximum); mean: 20.60; standard deviation: 8.84	

Variable Notes: This subscale measures the degree to which a teacher thinks his relationship with a student is negative and full of conflict. STRS item 19 is reverse coded. Score is sum of STRS items 2, 11, 13, 16, 18, 19, 20, 22, 23, 24, 25, 26. Scores can range from 12 to 60 with higher scores indicating that the teacher has problems with the student and thinks the student is angry/unpredictable. As a result, the teacher feels that he is ineffective.

47.C. Teacher-Child Relationship Scale – Dependency

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4PIADEP	
Variable Label				PreK: Pianta Teacher Child Relationship Scale Dependency	
Source Variables				STRS items 6, 8, 10, 14, 17	
EHSREP Study Psychometrics				Sample size: 1,042; possible range: 5 (minimum) - 25 (maximum); actual range: 4 (minimum) - 19 (maximum); mean: 7.67; standard deviation: 3.19	

Variable Notes: This subscale measures the degree to which a teacher thinks a student is dependent on him. Score is the sum of STRS items 6, 8, 10, 14, 17. Scores can range from 5 to 25 with higher scores indicating that the student has a strong reaction to separation from the teacher and the student asks for help when it is not needed. As a result, the teacher worries about the student's reliance.

47.D. Teacher-Child Relationship Scale – Total Positive Relationship

	14 Month	24 Month	36 Month	Pre-K	Grade 5
Data Wave				X	
Variable Name				T4PIAPOS	
Variable Label				PreK: Pianta Teacher Child Relationship Scale Total Positive Relationship	
Source Variables				T4PIACLO, T4PIACON, T4PIADEP	
EHSREP Study Psychometrics				Sample size: 1,046; possible range: 28 (minimum) - 140 (maximum); actual range: 54 (minimum) - 135 (maximum); mean: 113.51; standard deviation: 13.68	

Variable Notes: This measures a teacher's overall perception of his relationship with a student. Score is sum of T4PIACLO, T4PIACON, T4PIADEP. Scores can range from 28 to 140 with higher scores indicating high relationship quality (lack of conflict, low dependency, and high closeness).

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