The Fragile Families and Child Wellbeing Study changed its name to The Future of Families and Child Wellbeing Study (FFCWS). Due to the issue date of this document, FFCWS will be referenced by its former name. Any further reference to FFCWS should kindly observe this name change.

User's Guide for the Fragile Families and Child Wellbeing Study Public Data, Year 5

Updated September 2019

Bendheim-Thoman
Center for Research on Child Wellbeing
Wallace Hall
Princeton University
Princeton, NJ 08544
https://crcw.princeton.edu/

Columbia Population Research Center
1255 Amsterdam Avenue, Room 715
Columbia University
New York, NY 10027
http://cupop.columbia.edu/

Prepared by the staff at the Bendheim-Thoman Center for Research on Child Wellbeing (CRCW), Princeton University. For more information about FFCWS, please visit our website at https://fragilefamilies.princeton.edu/ or email ffdata@princeton.edu.

Table of Contents

0. Study Overview

The Fragile Families and Child Wellbeing Study (FFCWS) was initiated to address four questions of great interest to researchers and policy makers:

1. What are the conditions and capabilities of unmarried parents, especially fathers?
2. What is the nature of the relationships between unmarried parents?
3. How do children born into these families fare?
4. How do policies and environmental conditions affect families and children?

The FFCWS follows a cohort of 4,898 children born in the U.S. between 1998 and 2000 and includes an over-sample of non-marital births. The sample includes children born in twenty large, U.S. cities (defined as populations of 200,000 or more). Sixteen of the twenty cities were selected using a stratified random sample of U.S. cities with populations of 200,000 or more grouped according to their policy environments and labor market conditions. These cities comprise the nationally-representative sample. See the sample design paper[1] for details on the selection of cities, hospitals, and births.

0.1. The Core Study

The Core Study consists of interviews with both mothers and fathers at the child's birth and again when children are ages one, three, five, and nine. A child interview and in-home observations and assessments are also included at age nine. The Core follow-up at age fifteen includes interviews with the teen and primary caregiver (PCG) as well as in-home observations and assessments.

The parent/PCG interviews collect information on attitudes, relationships, parenting behavior, demographic characteristics, health (mental and physical), economic and employment status, neighborhood characteristics, and program participation. Many measures overlap with those used in other large-scale studies such as the Infant Health and Development Program (IHDP), Early Head Start, the Teenage Parent Demonstration, and the Early Childhood Longitudinal Study—Birth Cohort 2000 (ECLS-B).

See the FFCWS metadata website to browse or search the full list of FFCWS variables. Table 1 below shows the dates of each wave of data collection.

For the remainder of this Guide, we will refer to the follow-up waves of data collection in reference to the child's age. For example we will refer to the waved focused upon in this guide as "Year 5" (which is wave 4 in the data file).

[1] Reichman et al, "The Fragile Families and Child Wellbeing Study: Sample and Design" Children and Youth Services Review, 2001, Vol. 23, No. 4/5

Table 1: Timeline of the FFCWS Core Study

Wave	Age	Years
1 - Baseline	Birth	1998 - 2000
2	Age 1	1999 - 2001
3	Age 3	2001 - 2003
4	Age 5	2003 - 2006
5	Age 9	2007 - 2010
6	Age 15	2014 - 2017

0.2. Collaborative Studies

The In-Home Longitudinal Study of Pre-School Aged Children (In-Home Study) was a collaborative work of the researchers at the Princeton University Center for Health and Wellbeing (CHW), Columbia University, and Teachers College. The study placed particular emphasis on how parental resources in the form of parental presence or absence, time, and money influence children under the age of five. The In-Home Study collected information on a variety of domains of the child's environment, including: (1) physical environment: through quality of housing, nutrition and food security, health care, adequacy of clothing and supervision and (2) parenting: through parental discipline, parental attachment, and cognitive stimulation.

The In-Home Study included all of the following components at Years 3 and 5: Primary Caregiver interview, interviewer observations, and activity workbook. Note that the In-Home components at Years 9 and 15 were collected as part of the Core Study.

For further details on the collaborative studies at each wave, see that wave's User Guide or find a list of all current and completed collaborative studies on our website.

0.3. National Sample versus Full Sample

There are 20 cities in the full FFCWS sample. Sixteen of these cities were selected via a stratified random sample and comprise the "national" sample. For each wave of data and for each unit of analysis (mother, father, couple), users can weight the data up to two different populations – the national level[2] or the city level. Applying the national weights makes the data from the 16 randomly selected cities representative of births occurring in large U.S. cities (the 77 U.S. cities with populations over 200,000 in 1994) between 1998 and 2000. Applying the city-level weights makes the data from all 20 cities in the sample[3] representative of births in their particular city in 1998, 1999, or 2000, depending on the year in which the baseline data collection took place for that city.

[2] In this memo, the term national refers to all 77 U.S. cities with 1994 populations of 200,000 or more

[3] There are 109 cases in the data file that were not randomly selected for the core sample (some were randomly selected to be part of a separate study – the TLC3 study) and do not have national sample or city sample weights. Data users can identify and remove these cases using the weights sample flags (cm1citsm=0 for Baseline and cm2citsm=0 for Year 1). Data users can identify and remove these cases using the weights sample flags (cm1citsm = 0 or cm1citysm = 0).

The public use data do not contain the geographic identifiers needed to construct the stratum and primary sampling unit (PSU) variables necessary for using a Taylor Series methodology to estimate variances (except through a restricted use contract)[4]. Therefore, the public use data files contain a basic weight and a set of replicate weights. The replicate weights are used in place of the stratum and PSU variables. The replicate weights mask the locations of respondents, while still allowing for estimation of variance. If you are using the public use datasets, you will need to use the replicate weights to get estimates of variance for the sample. Applying the basic weight without the replicate weights will give you comparable point estimates, but will yield incorrect variance estimates. A brief introduction to the weights available for the public data files is available in the documentation memo "Fragile Families & Child Wellbeing Study: A Brief Guide to Using the Weights for Waves 1-6." For detailed information on the construction of the weights, see "Fragile Families & Child Wellbeing Study: Methodology for Constructing Mother, Father, and Couple Weights for Core Telephone Surveys".

0.4. Data Availability

There are two types of data available to data users.

0.4.1. Public data

Currently, Baseline, Year 1, Year 3, Year 5, Year 9, and Year 15 public data are available through the Princeton University Office of Population Research (OPR) data archive. To access these data, researchers must complete a brief application and a 25-word abstract about their research project. These files are available in Stata, SPSS, or SAS format and can be downloaded as one combined file (ff_allwaves_2018) or in six separate files by wave, such as "ff_wave4_2018" for Year 5.

0.4.2. Contract data

Contract data require a more formal application due to the sensitive nature of the variables available. Contract data available include files, such as a **geographic file** with variables for the focal child's birth city, mother's and father's state of residence at each interview, and stratum and PSU (note: replicate weights are available on the public file in lieu of these), a set of **contextual characteristics** of the census tract at each wave, **medical records data** for mothers and children from the birth hospitalization record, a **school characteristics file** based on National Center for Educational Statistics data, a **labor market and macroeconomic file** with data on local employment and national consumer confidence at each wave, and a **genetic data file** with candidate genes and telomere length.

For further detail regarding the content of the contract data and the application process for its access, please visit our website.

[4] Please note that data users who have access to the geographic identifiers may still want to use the replicate weights for their estimates. Using the replicate weights will likely yield similar standard errors (at least for cross-sectional estimates) as the alternative method.

0.5. Documentation

The remainder of this guide will provide a detailed overview of the **Year 5 Wave of the public FFCWS data**.

For User Guides for other waves of the FFCWS and further documentation including questionnaires and codebooks for each interview or weights documentation, see the Documentation page on our website.

1. Year 5 Components

The Year 5 wave of the FFCWS contains components from three sub-studies:

1. The FFCWS Core Study [a.k.a. "Core Study"] (includes mother and father interview)
2. The In-Home Longitudinal Study of Pre-School Aged Children [a.k.a. "In-Home Study"]
3. The Kindergarten Study Teacher Survey [a.k.a. "Kindergarten Study"]

The Year 5 public data file (ff_wave4_2018) includes data from all three sub-studies.

1.1. Funders and Study Administration

Funding for all three sub-studies at Year 5 was provided through grants from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD).[5] Since the Fragile Families and Child Wellbeing Study began in 1998, a consortium of private foundations, non-profit organizations, and government agencies has provided additional support. Since the Fragile Families and Child Wellbeing Study began in 1998, a consortium of private foundations, non-profit organizations, and government agencies has provided additional support. Please see our website for the full list of these partners. Data collection for these studies was administered by Mathematica Policy Research, Inc. (MPR) in Princeton, NJ.

The FFCWS Core Study was a joint effort by Princeton University's Center for Research on Child Wellbeing (CRCW) and Center for Health and Wellbeing (CHW), the Columbia Population Research Center (CPRC) and the National Center for Children and Families (NCCF) at Columbia University. The In-Home Longitudinal Study of Pre-School Aged Children was a collaboration of the researchers at the CHW of Princeton University, Columbia University, and Teachers College.

1.2. Surveys and Instruments

Each of these three sub-studies contains multiple surveys or instruments as listed in Table 2. This table also includes the sample sizes for each survey or instrument. For explanations of the variation in sample size, see the sections below on Eligibility and Data Collection Procedures.

Table 2: Year 5 Components and their Sample Sizes

Study	Surveys and Instruments	N
Core Study	Mother Survey	4,139
	Father Survey	3,159
In-Home Study	Primary Caregiver (PCG) Survey	2,989
	In-Home Activity Workbook	2,367*
	In-Home Interviewer Observations	2,129
Kindergarten Study	Teacher Survey	1,039

* N = participation in any In-Home Workbook Activities

[5] award numbers R01HD36916 (Core); R01HD039135 (In-Home); R01HD40421(Teacher)

2. Eligibility

2.1. Eligibility - Core Study (Mother and Father)

All respondents who completed a baseline interview were contacted for the Year 5 Core Study, as were non-respondent at baseline fathers whose partner (mother) had completed a baseline interview. A small portion of the original respondents were found to be ineligible at the time of the follow-up interviews. See the sample flags (c*4samp) for counts at Year 5. Reasons for considering a family ineligible for further interview include: child deceased, child adopted. Reasons for considering a parent ineligible include: a parent deceased and for fathers DNA confirmation that the original respondent is not the child's father.

2.2. Eligibility - In-Home Study

Respondents of the Year 5 Core Study were invited to participate in the Year 5 In-Home Study. The primary caregiver questionnaire was conducted by phone with the biological mother in situations where she or she and the biological father had custody of the "focal child" for half or more of the time. If the biological mother did not have primary custody of the child, the primary caregiver interview was conducted with the father, relative, or friend who had custody of the child half or more of the time. An additional set of questions were administered to non-parental caregiver at the beginning of the primary caregiver interview in situations where both biological parents were not the primary caregiver.

2.3. Eligibility - Kindergarten Study

In Section E of the primary caregiver survey, respondents were asked whether their child was either currently enrolled in Kindergarten, had been enrolled the previous year, or was going to be enrolled the following year – if any of these responses was affirmed, the respondent was deemed eligible for the Kindergarten Study. Keep in mind that the group eligible for the Kindergarten study were concurrently eligible for the In-Home Study and had opted to participate in the In-Home Study, as consent for the Kindergarten Study was asked during primary caregiver survey.

3. Data Collection Procedures

3.1. Data collection Procedures - Core Study

The Year 5 wave of Core data collection took place from 2003 to 2006. These interviews were designed to be conducted by telephone using a Computer Assisted Telephone Instrument (CATI). All mothers who remained eligible were contacted for the Year 5 interview. All Year 5 mother interviews were first attempted by telephone using CATI. In cases in which we could not contact the mother by telephone, local field interviewers were assigned cases requiring field locating. The field interviewers were encouraged to have respondents call a 24-hour toll-free number at the Mathematica Policy Research (MPR) survey operations center to complete the interview on the CATI system. Field interviewers were also trained in administration of the survey instrument. Respondents completing the Year 5 interviews by telephone were provided with $30 incentive payment. Those requiring a field visit to complete the core survey were provided with $50 incentive payment.

Father follow-up interviews followed the same protocols and incentives as mothers. Some fathers were incarcerated at the time of data collection in their location. In these cases, MPR staff worked to obtain special clearance, including permission from the Federal Bureau of Prisons, to conduct interviews with incarcerated respondents. When possible for cost containment purposes, interviews with incarcerated respondents were attempted by telephone. However, some prisons do not permit telephone interviews. In those cases MPR field interviewers arranged for in-person visits.

3.2. Data collection Procedures - In-Home Study

The Year 5 In-Home Study included a (1) survey administered to the focal child's Primary Caregiver (PCG), (2) observations of the home, the child's interactions with the caregiver, and surrounding environment, and (3) a workbook of activities for anthropometric and cognitive measures of the PCG and child – all to be completed in the family's home. Table 3 shows a complete list of the components included in the Year 5 In-Home Study workbook.

Table 3: Workbook components at Year 5

Component	PCG	Child
Height and weight measurements	X	X
Peabody Picture Vocabulary Test/Test de Vocabulario en Imagenes Peabody (PPVT/TVIP)	X	X
Woodcock-Johnson Letter-Word Recognition Test		X
Attention Sustained Task (Leiter)		X
Five Minute Speech Sample (MDoc)	X	
Child Care and Employment Calendars	X	

Flow charts detailing the sequence of In-Home Study component administration are available in the Appendix. Changes made to the In-Home questionnaires during data collection are also included in the Appendix.

3.3. Data collection Procedures - Kindergarten Study

During the In-Home Study, the decision was made to switch from child care observations (completed at Year 3) to kindergarten surveys, given that children were aging out of child care. In the cities in which the In-Home Study had already been completed, parents were called to get contact info on the kindergarten teacher and verbal permission to contact that person. In the cities in which the In-Home had not yet begun, this process was incorporated into the In-Home and written parental permission was obtained in person.

Letters were sent to the primary school district in each city, requesting permission from the district to contact teachers. Only a minimal number of the school districts that were contacted refused to allow their teachers to participate. In cases of consent, kindergarten teachers were then contacted, and they themselves could either participate or not. In the case of children who fell outside the primary school district in their city, the kindergarten teacher was contacted directly.

4. Known Issues

This section highlights known issues and errors in the Year 5 data that could not be cleaned or where data could not be recovered. Users should review this information to plan their analysis accordingly.

Kindergarten: The questions that ask if schools are on summer break (m4b7/f4b7) and if child is currently enrolled in kindergarten (m4b7a/f4b7a) are not reliable indicators. Interviewers were instructed to code these questions without asking. The results in m4b7 and f4b7 do not line up consistently with the interview date, and a large number of cases in m4b7a and f4b7a are coded as skip without any skip instruction. Only respondents in two cities have valid data on kindergarten enrollment (m4b8a/f4b8a). We recommend that users not use questions m4b7 and f4b7 for determining if child is currently enrolled in kindergarten.

Unlikely responses in Primary Caregiver Survey: Variable p4a28, associated with item A28 (how many dental fillings has <child> ever had?), contains a value 27 (dental fillings) which may seem too high for a five-year-old.

Variables p4b1, p4b2, associated with item B1, B2, which asked about number of hours watching TV by child per day, contain a handful records with value as 24.

5. File Contents and Structure

5.1. Variable Name Structure

In the Year 5 data, each variable name is unique and uses certain characters, as well as a specific order that will help identify to whom and in which survey the question was asked. All variable names from Year 5 begin with an alphabetic character. If the variable name begins with the letter "**c**", the variable is constructed (see section 5.2 for more on constructed variables). If not, the variable corresponds to a question asked in a Year 5 survey and the first character in the variable name indicates to which instrument the variable corresponds. See Table 5 for a full list of Year 5 survey instruments and their prefix letters.

In Year 5 variable names, what follows the instrument is the number "4" to indicate the wave of data collection. Furthermore, when the variable is directly associated with the questionnaire (is not constructed), the leaf (the end of the variable) will indicate the section letter and the question number to which to variable corresponds. See Table 4a for a list of Year 5 survey instruments and their prefix letters. Table 4b shows the variable name structure for the In-Home Activity Workbook components.

Table 4a: Variable name structure (survey variables and weights)

Variable Name			Survey
Prefix	**Wave**	**Leaf**	
m	4	[a-l|r]1-9*	Mother Survey
m	4	natwt|citywt *	National/City Weights (for mother)
f	4	[a-l|r]1-9*	Father Survey
f	4	natwt|citywt*	National/City Weights (for father)
q	4	natwt|citywt*	National/City Weights (for couple)
k	4	natwt|citywt*	National/City Weights (for child)
t	4	[a-g]1-9*	Teacher Survey (Kindergarten Study)
p	4	[a-n]1-9*	Primary Caregiver (PCG) Interview (Sections A-N)
p	4	natwt|citywt*	National/City Weights (for PCG)
o	4	[p-v]1-9*	Interviewer Observations (In-Home) (Sections P-V)

Table 4b: Variable name structure (workbook variables)

Variable Name			Survey
Prefix	**Wave**	**Leaf**	
ch	4	*bmi|lb|kg|h|w	In-Home Study, Activity Workbook (A: Weight/Height)
ch	4	[pv|pp|tv]*	In-Home Study, Activity Workbook (B: PPVT – Child)
ch	4	wj*	In-Home Study, Activity Workbook (C: W-J Test)
ch	4	lr*	In-Home Study, Activity Workbook (D: Attention Task)
ch	4	emp*	In-Home Study, Activity Workbook (E: Employment Calendar)
ch	4	cc*	In-Home Study, Activity Workbook (E: Child Care Calendar)
ch	4	mdoc*	In-Home Study, Activity Workbook (F: Five-Minute Speech)
ch	4	[pv|pp|tv]*_m	In-Home Study, Activity Workbook (F: PPVT/TVIP - PCG)
ch	4	natwt|citywt*	National/City Weights (for PCG)
ch	4	[p-v]1-9*	In-Home Study, Primary Caregiver Observation (P-V)

Note: an asterisk (*) is used to indicate the existence of other characters in the variable name. To provide summaries of the variable names, we used asterisk instead of listing each individual case.

5.2. Constructed Variables

A number of variables were constructed and added to the data set by staff. Variables under this group begin with the letter "c". Some represent data not otherwise available to the public, and some are merely aggregations of existing data that we provided as a "shortcut" for researchers. Researchers may find these variables useful, but are free to construct them in other ways.

When constructing variables such as age, relationship status, and the household roster, the mother's report was generally used. However, there were a few cases in which the father's report was used to fill in missing information or to correct discrepancies in the mother's report.

5.3. Survey Variables

Survey variables contain responses to questions asked during a survey and their variable names begin with a letter indicating to which survey they correspond. For a list of survey

instruments and their corresponding prefixes in Year 5, please refer to Table 5. The survey instrument is named for either the person answering questions or the place being surveyed. Following the prefix and wave, survey variables were named as the item in the instrument. For example, variable p4a1 in the data set contains responses provided to item A1 (I*n general, would you say child's health is* …) in the PCG survey.

Table 5: Survey Instruments in Year 5

instrument	instrument description
m	Mother Survey
f	Father Survey
p	Primary Caregiver (PCG) Survey
h	In-Home Activity Workbook
o	Interviewer Observations (In-Home)
t	Teacher Survey
q	Couple (used only as weights)
k	Child (used only as weights)

Survey variables were processed as follows:

a. Most categorical variables, which were created from survey questions with pre-coded response categories, have values corresponding to the codes presented in the instrument. Occasionally, we recoded one or two pre-coded values of a few categorical variables to make such codes consistent with those used for many other variables. For example, many items in the In-Home Study instruments had the responses pre-coded as 1 for "yes" and 0 for "no", but a few items, such as item o4r4 (*does the housing unit contain holes in floor)* or o4r5 (*does the housing unit contain broken plaster or peeling paint over 1 square foot or more?*) had the response pre-coded as "1" for "yes" or "affirmative situation" and "2" for "No" or "negative situation". Value "2" recorded for variables such as o4r4 and o4r5 was recoded to "0".
b. A few survey questions allowed multiple pre-coded responses. Each possible response was coded into an indicator variable whose value was assigned as 1 for affirmative situation and 0, otherwise. For example, all possible responses provided for In-Home Observations item S1 (*how would you best describe the child's clothing?)* were coded into a series of 10 indicator variables: o4s1_1 to o4s1_10, where variable o3s1_1 represents if "*dirty, unkempt*" clothing condition, variable o4s1_2 represents if "*dirty due to playing/eating*" and so on. In addition, the responses provided for category "Other (Specify)" for the same item were examined; and if any could be reasonably coded into an existing category, such response(s) was recoded accordingly. For example, "*oversized shirt*" recorded as "Other"; item S1 was coded as "1" in the variable o4s1_8 (for *clothing is too large*).

5.4. Key Identifier

The Family ID (**idnum**) is the key identifier on the file for merging and sorting. idnum is the random family case ID that links the biological parents of the child at baseline, and in each subsequent wave, links all survey components for each family sampled at baseline. idnum is a string variable consisting of 4 characters. Because, the idnum identifier remains fixed throughout the waves, it can be used to merge data from any wave of the study.

5.5. Variable Label

Variable labels in the data and codebook correspond as closely as possible to the questions in the questionnaire; however, for formatting reasons some of the questions have been modified or abbreviated in the labels. Please see the questionnaire for official question wording and response categories.

5.6. Variable Response and Missing Data Code

All variables also have value labels describing valid and missing responses. In addition to the listed response categories in the questionnaire, each variable (including continuous variables) can have any of the following nine negative values that indicate missing data:

Table 6: Missing Data Codes

Code	Label
-1	Refuse
-2	Don't know
-3	Missing (due to technical error)
-4	Multiple answers
-5	Not asked (not in survey version)
-6	Logical Skip
-7	Not applicable
-8	Out-of-range
-9	Not in wave

Occasionally other codes were used (-10 to -16) to indicate the question did not apply to the respondent or the respondent had effectively provided a response via an earlier question. In some cases, the negative codes are valid responses (ex: z scores).

5.7. Open-Ended Response Codes

Free response questions (open-ended questions) were coded by staff. Codes were assigned by two staff members working independently and these codes were reconciled by a third staff member.

When appropriate, open-ended responses were recoded into the existing response categories of the questions. Open-ended responses that did not fit into the existing response categories were recoded into new categories in the 100 range (101, 102, etc.) if there were 10 or more similar responses. Cases that indicate an "other" but were vague or unique remain coded simply as "Other (not specified)."

6. Data Cleaning

For data derived from phone surveys, limited data cleaning was performed on the files. Some values were recoded to "–8 out of range" and minor changes were made to earnings, income, household roster, ages, etc. if the decision was clear cut. If not, data was left for the user to decide how to code. Known inconsistencies across variables remain in the data for users to consider in their analysis.

In general for the data derived from the In-Home Study, we followed the following steps to clean the data:

First, the identifiers were checked for uniqueness. Records having duplicate identifiers were marked for verification against records in the database of the survey firm. To verify linkage status, records with unique identifiers were matched to records in most related data sets such as the FFCWS Core data, the activity workbook data (which was provided in batches of separate data sets), and the disposition data. Unmatched records were separated for further verification, and eventually were either dropped, if invalid, or retained, after correction(s).

Second, frequency distributions of categorical variables were examined to verify whether or not the codes appeared in the data were consistent with the corresponding codes listed in the instruments. In the process, any irregular responses or responses not within the permissible data value ranges were marked for checking. Series of multi-level crosstabulations of related variables were generated to verify response consistencies. Obviously inconsistent data values, if could be reasonably edited, were either edited logically or replaced by value imputed from a "more reliable" response provided to one or some other related variables.

Third, inconsistent or irregular data values that could not be edited logically were marked and sent to the survey firm for cross-verifying against responses recorded in the original data collection forms or raw files in the computer assisted telephone interview (CATI) system. Resolved data value, if different from the value in the earlier release(s) from the survey firm and also assessed as more reliable, was corrected accordingly.

Fourth, data collected from the pilot cities were combined with data collected from the other eighteen cities. To combine data, items not exactly the same in two versions of the questionnaires were identified and processed as follows: if the question asked is the same in two versions but the codes used for the responses are not identical: values used for the pilot cities were recoded to match the codes used for the eighteen cities.

7. Weights

The FFCWS sample was selected using a complex sample design, where the sample members were not selected independently and were not selected with equal probabilities. For instance, non-marital births were oversampled. Therefore, Mathematica Policy Research has created a Year 5 set of weights to adjust for the sample design (probability of selection), non-response at baseline, and attrition based on observed characteristics over the waves.

Public users, who do not have access to the stratum and PSU variables, can use a set of replicate weights to properly estimate variance for the sample. Contract data users can employ the replicate weights or Taylor Series method which incorporates strata and PSU.

A brief introduction to the weights available for the public data files is available in the documentation memo "Fragile Families & Child Wellbeing Study: A Brief Guide to Using the Weights for Waves 1-6" For detailed information on the construction of the sample weights, please read "Fragile Families & Child Wellbeing Study: Methodology for Constructing Mother, Father, and Couple Weights for Core Telephone Surveys" as well as "Methodology for Constructing Primary Caregiver Weights for Wave 3-5 Fragile Families and Child Wellbeing Study" and "Methodology for Constructing Child Weights for Wave 3-5 Fragile Families and Child Wellbeing Study."

8. Introduction to Topics from the Data

Year 5 data covers a range of topics throughout surveys administered to the focal child's biological mother, biological father, primary caregiver, and/or kindergarten teacher, as well as through home activities and observations. Table 7 provides an overview of some of the topics covered in Year 5 by survey instrument (for a full list of survey instruments, please refer to Table 5).

Table 7: Major topics in Year 5 by survey instrument

Topics	m	f	p	h	o	t
Attitudes and Expectations	X	X	X			X
Childcare	X	X		X		
Cognitive and Behavioral Development	X	X	X	X	X	X
Demographics	X	X		X	X	X
Education and School	X	X				X
Employment	X	X		X		
Family and Social Ties	X	X				
Finances	X	X	X	X		
Health and Health Behavior	X	X	X	X	X	X
Housing and Neighborhood	X	X	X	X	X	X
Legal System	X	X	X			
Paradata and Weights	X	X	X	X	X	X
Parenting	X	X	X	X	X	
Romantic Relationships	X	X				

Note: There are also weights for the couple (q) and child (k).

The next sections of this User Guide are organized by these topic categories. Within each section, we will list **constructed variables** (created by staff to add shortcuts for data users), followed by **scales** and **concepts** that relate to each topic. We define a scale as a composite measure that is composed of variables within the same construct. By constructing a scale, researchers can indicate the degree or intensity to which respondents adhere to the given construct. Scales are typically derived from an established source or existing study. Information on scoring a scale can be found within each section. Concepts are also aggregations of similar variables; however, we do not provide information on scoring, nor do we treat concepts as validated scales.

Researchers are also encouraged to interrogate the data further and to refer to the questionnaires provided in the Documentation for more information on the survey content.

9. Paradata

Every survey at Year 5 includes variables with information about the interview, also known as paradata. Within the available Year 5 paradata is the date (month and year) the interview was administered, the language it was administered in (English or Spanish), and the way in which it was delivered to the respondent (in person or by phone). **Sample flag variables** were also constructed by staff to help users sort the data by (1) respondent participation in a given survey and, if applicable, their reason for non-response, or (2) whether the respondent belongs to the nationally-representative or city-representative sample. The rest of this chapter will highlight specific constructed paradata variables which are provided in the Year 5 data. For a full list of constructed variables see Table 9.

9.1. Constructed Variables - Age

Ages of the child, parents and primary caregiver are recorded across several different surveys. Age is recorded in the Core Surveys for mother, father and child through the constructed variables: **cm4age** (mother's age at the interview), **cf4age** (father's age at the interview), **cm4b_age** and **cf4b_age** (for the child's age at the mother and father interview, respectively). Data users should note that the child constructed age in years variable was rounded up or down to the nearest year, based on the calculated age in months.

Below are the constructed variables for age of child and their primary caregiver at the time of each of the In-Home Activities.

- **ch4agemos** age of child at time of height and weight measurements, in months
- **ch4ppvtage** age of child at time of PPVT administration, in months
- **ch4ppvtage_m** age of PCG at time of PPVT administration, in months

9.2. Constructed Variables - Sample Flags

There are two types of sample flags – **interview flags** and **status flags**. Interview flags denote whether a person was interviewed in a particular wave. Status flags provide other important information about a case at a particular period (non-response reason, in a particular subsample, etc).

9.2.1. Interview completion flags

- **cm4mint**/**cm4fint** indicates whether mother/father was interviewed, respectively, using the mother's report.
- **cf4mint**/**cf4fint** indicates whether mother/father was interviewed, respectively, using the father's report.

Cases in which one or more respondents in a family were not interviewed in the current wave are included in the data file, but are coded "Not in wave" (-9) for all variables from the survey(s) that were not completed. Therefore, you will need to use these interview flags to subset out appropriate samples.

9.2.2. Status flags

- **cm4samp** and **cf4samp** provide information on the mother or father's disposition status (whether eligible and reasons for non-response, such as mother/father/child died since previous wave).
- **c*4natsm** and **c*4citsm** indicate whether the respondent is in the national sample and/or the 20-cities sample and was interviewed in the wave.
- **cm1innatsm** and **cm1citsm** (from the baseline file) indicate whether the respondent was part of the national/city sample at baseline (regardless of whether they were interviewed at any given wave).

Note: There are a small number of cases that do not have weights but have valid survey data) and there are a small number of cases that have positive weights, but no survey data because the parent/child was deceased or the child was adopted (see Appendix B of "Using the Fragile Families Weights" for more information).

- **ch4ff5** indicates whether the family participated in the Core Study at Year 5.
- **ch4act5** indicates whether the family participated in any activity component in the In-Home Survey at Year 5.

A handful of mothers provided conflicting information over the waves about who is the biological father of the child.

- **cm4fdiff** specifies cases where mother indicated that the biological father of focal child was a different man than had been indicated at earlier waves and for whom we had no reason to doubt this information. However, we cannot determine the accuracy of these reports

At the time of the follow-up interviews, we attempted to interview the mother first. This was based on the assumption that, if the parents are not living together, the mother would be easier to locate and would have updated locating information about the father. There were, however, cases in which the mother was interviewed after the father. Before comparing mothers' and fathers' reports of time sensitive measures (i.e. relationship status, income), data users should check the time gap between parent interviews using the **cm4tdiff** constructed variable.

9.3. Constructed Variables - Status of survey completion

- **ch4inttype_mod** was constructed to identify the specific component(s) of the In-Home Study that a respondent was able to complete.

The variable ch4inttype_mod was created based on the final disposition status, as well as:

- Information provided to questions in the parent survey,
- Observations of the interviewer,
- Anthropometric measurements, and
- PPVT/TVIP or Woodcock-Johnson test scores in the Activity workbook.

Table 8: ch4inttype_mod distribution

	Status of Survey Completion	Frequency	%
1	In-Home Survey, activity assessments, observations	2,112	70.4
2	In-Home Survey, activity assessments, no observations	235	7.8
3	Phone Survey, no activity assessments, no observations	625	20.9
4	Phone Survey, no activity assessments, with observations	9	0.30
5	Some activity assessments; no survey; no observations	20	0.67
	Total	3,001	100

Table 9: Constructed variables with administrative information:

Constructed Variable	Description of Constructed Variable
c[m|f]4age	Mother's/Father's age (years)
c[m|f]4b_age	Child's age at time of Mother/Father interview (months)
c[m|f|q]4citsm	Year 5 city sample flag
c[m|f|q]4natsm	Year 5 national sample flag
c[m|f|q]4natsmx	Year 5 national sample flag (excluding one city)
c[m|f]4fint	Was father interviewed at Year 5?
c[m|f]4intmon	Mother/Father interview month
c[m|f]4intyr	Mother/Father interview year
c[m|f]4mint	Was mother interviewed at Year 5?
cf4new60	Was father first interviewed at Year 5?
c[m|f]4samp	Mother/Father non-response reason
c[m|f]4span	Interview conducted in Spanish
c[m|f|h]4tele	Interview conducted by telephone
c[m|f]4twoc	Two cities flag
ch4act5	Participated in any activity component
ch4datacoll	Data Collector ID
ch4datacoll2	Data Collector ID
ch4ff5	Participated in Year 5 Core Survey
ch4htwt	Child participated in anthropometric measurements
ch4intmon	In-Home interview month
ch44intyr	In-Home interview year
ch4inttype_mod	Status of completion of survey
ch4mesmo	Month of in-home assessment/activity component
ch4mesyr	Year of in-home assessment/activity component
ch4ppvtage	Child PPVT – age at administration (months)
ch4ppvtage_m	PCG age at PPVT/TVIP administration (months)
cm4fdiff	Different father was reported at Year 5
cm4tdiff	Time difference between mother and father interviews
ch4emp_year	Employment Calendar Interview Year
ch4emp_month	Employment Calendar Interview Month

Constructed Variable	Description of Constructed Variable
ch4cc_year	Child Care Interview Year
ch4cc_month	Child Care Interview Month
ct4data	Child's teacher participated in Kindergarten Survey
ct4kyear	Kindergarten Year
ct4teacherage	Teacher age at time of survey

10. Finances

At Year 5, mother, father and PCG, when applicable, were asked questions regarding their household finances. Table 10 details subtopics within "finances" and in which surveys they are included. Child support questions include questions regarding the amount of money the respondent receives or pays in child support, as well as the frequency of the transaction. The respondent's earnings (cash, housing, meals, clothes) are derived from traditional employment, non-traditional employment (includes illegal activity). Expenses are based on the respondent's expenses on food and housing. For questions related to the respondent's financial assets, the interviewer asks the respondent about home and vehicle ownership, and savings accounts. The respondent's household income is their total household income from all sources in the last year. Material hardship is the extent to which the respondent experienced hunger, homelessness, utility shut-off and forgone medical care due to a lack of financial resources. Private transfers involve financial help the respondent receives from or provides to family and friends, whereas public transfers/social services relate to financial help the respondent receives that is government-issued.

Table 10: Subtopics in Finances in Year 5 by survey instrument

Subtopics	**m**	**f**	**p**	**h**	**o**	**t**
Child support	X	X				
Earnings	X	X				
Expenses	X	X	X	X		
Financial assets	X	X				
Household income/poverty	X	X				
Material hardship	X	X	X			
Private transfers	X	X				
Public transfers and social services	X	X	X			

10.1. Constructed Variables - Household Income

Household income measures were constructed for mothers and fathers, but users should review the following information regarding the imputation and construction process carefully before deciding how and whether to use these variables.

- **cm4hhinc** and cf4hhinc are mother and father's household income at Year 5, respectively

- **cf4hhincb**, an additional father variable, uses mother reports of household income for married and cohabiting couples

Respondents were asked to provide an exact dollar amount of their household income. If they could not, they were asked to provide a range. This strategy was effective in reducing missing data to about 10 percent, although a portion of parents reported a range rather than an exact dollar amount. In constructing household income (c*4hhinc), we first imputed dollar amounts for those who reported a range of income

(using others who provided income in the same range but provided a detailed amount of income). Next, we imputed dollar amounts for those with no reported income. Both imputations included the following covariates: relationship status (mother report), age, race/ethnicity, nativity, whether employed last year, earnings, total adults in the household, and whether welfare was received. Imputations for those who reported a range were based on parent's own characteristics. Imputations for missing income were based on both parent's characteristics for married and cohabiting couples; otherwise, they were based on parent's own characteristics.

10.2. Constructed Variables - Household Income Imputation Flags

- **cm4hhimp, cf4hhimp** and **cf4hhimpb** indicate which parent reported income and which parents have imputed income (in reference to cm4hhinc, cf4hhinc, and cf4hhincb, respectively).

Please note that if parents reported a range of income in brackets, they are not flagged as having imputed data in these flags. Users can examine the raw variables to determine who had detailed/bracketed data.

10.3. Constructed Variables - Poverty Measures

- **cm4povco** and **cf4povco** indicate the poverty ratio. The poverty ratio is the ratio of total household income, as defined in c*4hhinc, to the official poverty thresholds, designated by the U.S. Census Bureau.
- **cm4povca** and **cf4povca** indicate poverty categories by transforming the poverty ratios into categorical variables.

The thresholds in c*4povca vary by family composition and year. At each wave, we used the poverty thresholds for the year preceding the interview. We calculated separate thresholds based on mother and father reports of household size and composition. However, calculations for married/cohabiting mothers and fathers rely on mother reports of household size and composition. A small number of missing values (don't know, refused) were treated as 0 in household membership counts.

- **cf4povcob** and **cf4povcab** are the poverty ratio and categories household income for married and cohabiting couples (based on cf4hhincb and cf4hhimpb).

The imputation flags created for the household income variables also refer to the poverty variables.

Please visit https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html for detailed information about poverty thresholds.

10.4. Constructed Variables - Food Expenditure

- **cp4k2_expen** is the amount of money (in dollars) families spend for food used at home per month.

Variable cp4k2_expen was created based on variables p4k2, p4k2_per and p4k2a. The monthly value was generated by adjusting the amount provided (p4k2) in the time period given (p4k2_per) to obtain the expense for the whole month. If only a data

range was provided (p4k2a), the midpoint value of that range was used in combination with the corresponding time period in the adjustment. For the computation, a few missing values of p4k2_per were imputed logically for cases with only data for p4k2. Missing value of p4k2_per was often replaced by a common time period given for both p4k4 and p4k5; or the period available only for either p4k4 or p4k5 provided that such period appeared reasonable for the amount (p4k2) taking into consideration the number of persons living in the household. Values of p4k2_expen computed based on an imputed value of p4k2_per were flagged.

- **cp4k4_expen** is the amount of money (in dollars) families spend for food taken out or food delivered per month.

Variable cp4k4_expen was created based on variables p4k4, p4k4_per and p4k4a. The monthly value was generated by adjusting the amount provided (p4k4) in the time period given for (p4k4_per) to obtain the expense for the whole month. If only a data range was provided (p4k4a), the midpoint value of that range was used in combination with the corresponding time period in the adjustment. For the computation, a few missing values of p4k4_per were imputed logically for cases with only data for p4k4. Missing value of p4k4_per was often replaced by a common time period given for both p4k5 and p4k2; or the only period available for either p4k5 or p4k2 provided that such period appeared as reasonable for the amount (p4k4) taking into consideration the number of persons living in the household. All values of cp4k4_expen computed based on imputed value of p4k4_per were flagged.

- **cp4k5_expen** is amount of money (in dollars) families spend eating out per month.

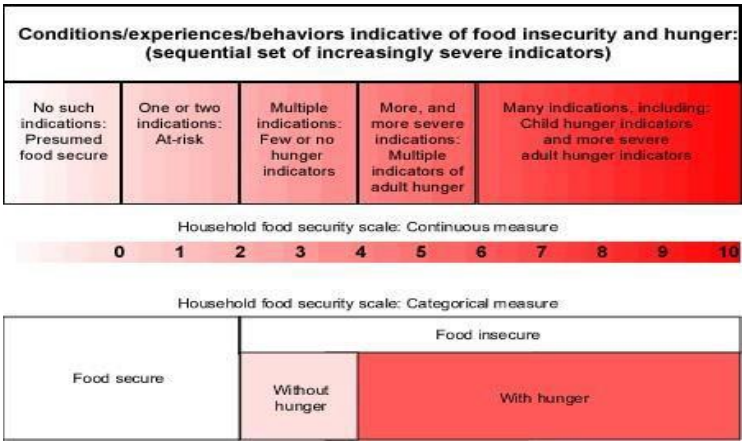
Variable cp4k5_expen was created based on variables p4k5, p4k5_per and p4k5a. The monthly value was generated by adjusting the amount provided (p4k5) in the time period given for (p4k5_per) to obtain the expense for the whole month. If only a data range was provided (p4k5a), the midpoint value of that range was used in combination with the corresponding time period in the adjustment. For the computation, a few missing values of p4k5_per were imputed logically for cases having only data for p4k5. Missing value of p4k5_per was often replaced by a common time period given for both p4k4 and p4k2; or the period available only for either p4k4 or p4k2 provided that such period appeared as reasonable for the amount (p4k5) taking into consideration the number of persons living in the household. All values of cp4k5_expen computed based on imputed value of p4k5_per were flagged.

- **cp4food_exp** is the total amount of money (in dollars) families spend on food per month.

The value of cp4food_exp is the sum of cp4k2_expen, cp4k4_expen, and cp4k5_expen. Data users may consider creating a composite variable to also include the value of the food stamps received (variable p4k1a1 for 18 cities, and m4i8c2/f4i8c2 for the pilot cities).

10.5. Scale – Household Food Security

The household food security scale can be constructed based on the data on nutrition gathered in Section D of the PCG questionnaire. This scale may be interpreted using a continuous measure or a categorical measure, as seen below:



Source: http://www.ers.usda.gov/briefing/foodsecurity/measurment/index.htm

On occasion "food insecure with hunger" is further divided into: a) food insecure with hunger – moderate (hunger among adults but not children), and b) food insecure with hunger – severe (hunger among children and more severe hunger among adults).

Some researchers have established a separate set of three categories to measure children's hunger using the eight variables on the scale dealing specifically with children. The categories used by these researchers are: a) child hunger, b) reduced-quality diet for children, and c) no child hunger or reduced-quality diet. Specific response rates corresponding with these three categories are not readily available.

10.5.1. Sample Response Rates to Food Security Questions

In Table 11, existing studies are compared to FFCWS data at Year 5 (the frequency is calculated based on those of whom answered or were skipped from these series of PCG questions at Year 5). In the first column offers nationwide estimates, while the last column shows data representing poor families with children in four large urban counties.

Table 11: Sample Response Rates to Food Security Questions

		1998 ERS/USDA	Year 5	PDUC
Variable	Question	Andrews et al. 2000[6]	PCG Survey	Polit & Martinez 2000[7]
p4d1a	Worried food would run out	12.8	23.1	65.3
p4d1b	Food bought didn't last	10.8	16.0	56.2
p4d1c	Couldn't afford to eat balanced meals	9.1	9.4	34.8
p4d1d	Relied on few kinds of low-cost food to feed children	13.6	15.4	47.9
p4d1e	Couldn't feed child(ren) balanced meals	8.4	7.4	29.7
p4d3	Child(ren) were not eating enough	4.4	4.2	17.5
p4d4	Adult(s) cut size of meals or skipped meals	6	7.5	21.4
p4d4a	Adult(s) cut size or skipped meals, 3+ months	4.2	4.3	16.7
p4d5	Adult(s) ate less than felt he/she should	5.7	8.2	25.2
p4d6	Adult(s) hungry but didn't eat because couldn't afford	2.6	4.4	14.1
p4d7	Respondent lost weight	1.6	2.1	8.5
p4d9	Adult did not eat for whole day	1.3	1.8	8.7
p4d9a	Adult did not eat for whole day, 3+ months	0.9	1.2	6.6
p4d10	Cut size of child(ren)'s meals	1.6	1.8	8.2
p4d11	Child(ren) skipped meal	0.8	0.7	5
p4d11a	Child(ren) skipped meals, 3+ months	0.5	0.3	4
p4d12	Child(ren) hungry but couldn't afford more food	1.1	1.2	5.6
p4d13	Child(ren) did not eat food whole day	0.2	0.1	1.6

[6] Andrews, Nord, Bickel, and Carlson. "Household Food Security in the United States, 1999." `] Food Assistance and Nutrition Research Report No. 8. September 2000.

7 Polit, London, and Martinez. "Food Security and Hunger in Poor, Mother-Headed Families in Four U.S. Cities." Source: http://www.mdrc.org/Reports2000/UrbanChange/FoodSecurityHunger.htm May, 2000.

10.6. Scale – Material Hardship

At Year 5, 13 questions were asked to both mother and father to determine material hardship. These questions are derived from the "*Basic Needs – Ability to Meet Expenses*" section of the Survey on Income and Program Participation (SIPP) 1996 Panel Wave 8 Adult Well-Being Topical Module Questionnaire[8], the 1997 & 1999 New York City Social Indicators Survey (SIS) (Social Indicators Survey Center, 1997 & 1999), and the 1999 Study of Work, Welfare, and Family Well-Being of Iowa families on FIP (IOWA) (Iowa's assistance program).

10.6.1. Variables

Mother questions: **m4i23a - m4i23m** (13 variables)
Father questions: **f4i23a - f4i23m** (13 variables)

The FFCWS Year 5 Survey includes several material hardship measures that are taken from the Survey of Income and Program Participation.[9] These questions are also similar to Mayer and Jencks Chicago study of hardship and poverty.[10,11]

Some of the hardship questions are also derived from the 1997 and 1999 SIS. This study looks at families and individuals in New York City and monitors changes over time. Some of the material hardship questions found in the SIS are similar to those found in the SIPP, such as items referring to not paying bills on time and loss of utilities. Other questions concern the respondent's ([m|f]4i23c/p4d6) or his/her child's ([m|f]4i23b/p4d12) hunger, access to free food ([m|f]4i23a), and the places he/she has lived ([m|f]4i23i-j), all within the past 12 months and all due to financial difficulties.[12]

Two additional questions are derived from the IOWA study and ask whether the respondent has cut back on buying clothes ([m|f]4i23l), and whether the respondent has worked overtime or taken a second job ([m|f]4i23m). These questions were only asked in 18-cities. The IOWA study looks at the well-being and financial status of families who were on FIP assistance in 1999 (and who had at least one parent unemployed for the previous three months and received unsubsidized employment within the following three months).

10.6.2. Modifications

These "YES/NO" questions are similar to the original questions taken from other surveys, with a few exceptions. In the SIPP, respondents are asked whether "you/anyone in your household" had encountered the specified hardship. In the SIS, questions refer to "you

[8] Survey on Income and Program Participation: 1996 Panel Wave 8 Adult Well-Being Topical Module Questionnaire. (1998). Retrieved March 27, 2003, from http://www.sipp.census.gov/sipp/top_mod/1996/quests/wave8/awbook.html
[9] Bauman, K. (1998). Direct measures of poverty as indicators of economic need: Evidence from the survey income and program participation. *U.S. Census Bureau Poverty Measurement Papers.* Retrieved March 27, 2003, from http://www.census.gov/population/www/documentation/twps0030/twps0030.html
[10] Bauman, K. J. (1999). "Shifting family definitions: The effect of cohabitation and other nonfamily household relationships on measures of poverty." *Demography* 36(3):315-325.
[11] Mayer, S.E., & Jencks, C. (1989). Poverty and the Distribution of Material Hardship. Journal of Human Resources, 24 (1), 88-114.
[12] Social Indicators Survey Center, Columbia University School of Social Work. (1999). *1999 New York City Social Indicators Survey: Documentation and Codebook, Revised Version.*

[or your partner]." In W164 of the 1997 SIS, the questions is asked of "you [or your spouse/partner] [or your child] [or your children]." The corresponding FFCWS Survey questions refer only to the respondent and not to his/her partner or children.

Note: The FFCWS Year 5 Surveys include only a subset of the hardship questions used in the SIPP, SIS and IOWA studies.

10.6.3. Scoring

There is no established scoring for the material hardship questions included in the Year 5 surveys.

Table 12: Variables on Material Hardship

SIPP	SIS 1997	SIS 1999	IOWA	Variable	Source item
AW35_NEED1				m4i23d f4i23d	Was there any time in the past 12 months when you did not pay the full amount of the rent or mortgage?
AW38_NEED2				m4i23e f4i23e	In the past 12 months were you evicted from your home or apartment for not paying the rent or mortgage?
AW41_NEED3				m4i23f f4i23f	In the past 12 months, did you not pay the full amount of the gas, oil, or electricity bill?
AW50_NEED6				m4i23k f4i23k	In the past 12 months was anyone in your household who needed to see a doctor or go to the hospital but couldn't go because cost?
	W164			m4i23a f4i23a	In the past 12 months, did you receive free food or meals?
		HAR10		m4i23i f4i23i	In the past 12 months, did you move in with other people even for a little while because of financial problems?
		HAR12		m4i23j f4i23j	In the past 12 months, did you ever stay at a shelter, in an abandoned building, an automobile or any other place not meant for regular housing even for one night?
				m4i23h f4i23h	In the past 12 months, did you borrow money from friends to help pay bills?
			IOWA	m4i23l f4i23l	In the past 12 months have you cut back on buying clothes for yourself?
			IOWA	m4i23m f4i23m	In the past 12 months have you worked overtime or taken a second job?
				m4i23b f4i23b p4d6	In the past 12 months, was (child/were the children) ever hungry, but you couldn't afford more food?
				m4i23c f4i23c p4d12	In the past 12 months, were you ever hungry but didn't eat because you couldn't afford enough food?
				m4i23g f4i23b	Was your gas or electric service ever turned off or the heating oil company did not deliver oil because there wasn't enough money to pay the bills?

11. Health and Health Behavior

At Year 5, questions on health and health behavior were asked to the mother, father, PCG, and teacher. Within the subtopic of accidents and injuries are questions to the PCG about the child's accidents and injuries, why, when and how many times it occurred. Within disabilities, PCG were asked whether and which kind of disability the child has (ex: speech problems, Down's syndrome, cerebral palsy) and the mother and father are asked whether they take medication for attention deficit disorder. In the fertility history subtopic, respondents were asked whether they've had other children, how many, with whom and their children's ages. The health behavior topic covers observations of the child's hygiene and clothing as well as the child's eating and sleeping habits. Respondents were asked whether and how frequently they smoke cigarettes. The subtopic health care access and insurance include questions to the respondent about the frequency and type of health care visits (if they seek counseling, what type) and the type of insurance they are covered by and through whom they obtained insurance. Height and weight measurements of the respondent are asked within the Core Surveys and collected within the activity workbook of the In-Home Study. Respondents were asked whether they take medication and what they take it for (ex: asthma, diabetes, anxiety, pain). Mental health questions ask the respondent about their condition (ex: depression, anxiety) and how pervasive it is (ex: trouble concentrating, sleeping, weight loss, thoughts of death). Physical health questions relate to the respondent and the child – in terms of general health, frequency of hospital visits and limitations that have arisen because of their health condition. Substance use and abuse questions indicate the extent of the respondent's drug or alcohol dependence. Respondents were asked to indicate, if applicable, which drugs they were taking (ex: sedatives, marijuana, cocaine, hallucinogens) and how many times their substance use interfered with child care.

Table 13: Subtopics in Health and Health Behavior in Year 5

Subtopics	m	f	p	h	o	t
Accidents and injuries			X			
Disabilities	X	X	X			
Fertility history	X	X	X	X		
Health behavior	X	X	X		X	
Health care access and insurance	X	X	X			
Height and weight	X	X	X	X		
Medication	X	X				
Mental health	X	X	X			X
Physical health	X	X	X			X
Sexual health and behavior						
Substance use and abuse	X	X	X		X	

11.1. Constructed Variables - Height and Weight Measurements

In the Year 5 Core Survey, both mother and father self-reported their height and weight. Measurements were also recorded for height and weight of the child and PCG during the In-Home Survey, within the activity workbook.

11.1.1. Cleaning height and weight data - Children

Height and weight measurements in the raw data were examined to assess plausibility and to identify potential irregularities. About thirty implausible values of height (< 55 cm or >145 cm) and weight (< 8 kg or > 50 kg) were cross- verified with the survey firm. More than half of these height values were results of data entry mistakes and were replaced by the correct value. Records with value changed are: the height of seven children (initial value = 40 – 43 cm) were actually measured and recorded in inches; the height of one child (value = 11 cm) was entered without the last digit, which is a zero; and the weight of three children (400 pounds or more, initially) were entered without a decimal point to separate the last digit from the first two. Unresolved irregular measurements are associated with thirteen children with height ranges from 158 to 175.5 centimeters and a handful of children with weight recorded as slightly below 30 pounds or greater than 115 pounds. These irregular values remained in the data file. In addition, weight values recorded in pounds were converted to kilograms.

11.1.2. Cleaning height and weight data - PCGs

Initial weight and height of the PCG were combined from responses and/or measurements to the following items in the Activity Workbook:

a3: Interviewer: Is the mother (respondent) currently pregnant? I*f not pregnant, skip a4 and ask question a5.*

a4: Please tell me how much you weighed before you became pregnant (this time).

a5: I'd like to weigh you first, and then weigh (child). (If shoes are not off yet). Could you please take off your shoes? Please step on this scale. If refused or weight exceeded scale limit then ask question a5a.

a5a. Please tell me your weight (your best estimate is fine).

The initial weight was assigned either as (a) the actual measurement obtained for the non-pregnant PCG during the survey; or (b) the self-reported weight of the non-pregnant PCG who refused to be measured or the weight exceeded scale limit; or (c) the reported weight before pregnancy for pregnant women. Weight values in pounds were converted to kilograms. A handful of non-pregnant women had both measured and reported weights. For this situation, if the two numbers were not identical, the measured weight was retained.

The height of the PCG was the actual measurement obtained during the In-Home activities or, if not measured, the self-reported height. Height values reported in feet and inches were converted into centimeters. Obvious implausible height (very short < 100 centimeters or very tall > 200 centimeters) and/or weight values (very large > 180 kilograms or very light < 25 kilograms) were verified with the survey firm. A few of these values were results of data entry mistakes and were replaced with the correct values. In addition, a few implausible height measurements (extremely tall or short) were replaced by the more reasonable height obtained for the first wave of the survey. It should be noted that a handful of respondents with anthropometric measurements are not biological mothers of the child.

11.1.3. Constructing Children's Growth Indices

Popular growth indices such as weight for age, height for age, and weight for height were constructed based on the Center for Disease Control (CDC) 2000 growth curve using the distributed SAS programs. More details about the growth indices as well as the SAS programs used can be obtained from the presentation about the growth chart at: https://www.cdc.gov/nccdphp/dnpao/growthcharts[13]

11.1.4. Assessing Height and Weight Measurements

The three growth indices: height for age, weight for age and weight for height were used to identify records with implausible measurements. Table 14 presents the number and proportion of children with plausible measurements as well as children with implausible or missing measurements.

Table 14: Child Anthropomorphic Flag Values (ch4cflag)

Child Flag Values		N	%
0	Measures plausible	2.174	92.3
1	Missing weight or height	37	1.6

[13] Data included in the CDC Growth charts came from the following surveys: National Health Examination Survey (NHES), Cycles II and III, National Health and Nutrition Examination Survey (NHANES) I, II, and III, U.S. Vital Statistics, Wisconsin Vital Statistics, Missouri Vital Statistics, Fels Longitudinal Study, Pediatric Nutrition Surveillance System.

2	Missing date of measurement	10	0.4
5	Height implausible (haz < -5 or > 3)	37	1.6
7	Weight for height implausible (whz < -4 or > 5)	7	0.3
8	Weight for height missing based on CDC's program	89	3.8
		2,354	100

11.1.5. Body Mass Index (BMI)

The body mass index (variable: ch4cbmi) was computed as the weight in kilograms divided by the square of the height in meters (kg/m^2). The BMI index (variable ch4cbmi_z) is the BMI index for age, which is gender specific, and was derived based on the CDC's growth chart. This index can be used to measure underweight or obesity, as well as, to assess nutritional deficiency or chronic energy deficiency.

For children with one or more problems listed in Table 14, all related growth indices such as ch4cbmi, ch4cbmi_z, ch4bmi_p, ch4hap, ch4haz, ch4wap, ch4waz, ch4whp, and ch4whz were set to missing. It should be noted that the height and weight of the children with one of more measurement problems, however, remained in the data. Data users may consider using the indicator variable ch4cflag (problem in child's measurements) to exclude records with implausible height (in ch4chtcm) and/or weight (in ch4cwtkg or ch4cwtlb) from their analyses.

11.1.6. Nutritional Status and Growth Status

The National Center for Health Statistics (NCHS) criteria, recommended by the World Health Organization, were adopted to classify the nutritional status of children based on their growth indices. Children with a weight for age index (ch4waz) below -2.00 were considered as malnourished, between - 2.00 and +2.00 as eutrophic, and over +2.00 as obese as shown in Table 15.

Table 15: Nutritional Status of Children based on Weight for Age Index (ch4waz)

Status	**Boy**		**Girl**	
	N	%	N	%
Malnourished	15	1.4	6	0.6
Eutrophic	1,024	92.4	964	91
Obese	70	6.3	95	8.9
Total	1,109	100	1,065	100

In addition, the number and proportion of children with potential growth retardation are presented in Table 16.

Table 16: Number and Proportion of Children with Potential Growth Retardation

Status	Boy		Girl	
	N	%	N	%
Stunting (haz < -2)	29	2.6	10	0.9
Underweight (waz < -2)	15	1.4	6	0.6
Wasting (whz < -2)	19	1.7	16	1.5

11.1.7. Constructing PCG's Weight Indices

A weight value was marked as implausible if it was over 500 pounds (227.2 kg) or under 50 pounds (22.7 kg) and a height value was marked as implausible if it was at or below 4 feet 6 inches (138 cm) or above 7 feet (213 cm). Less than 1% of the PCGs who participated in the measurements had at least one implausible measurement. The number and proportion of PCGs based on status of their anthropometric measurements are shown in Table 17. As noted earlier, anthropometric measurements obtained from the assessment included a handful of caretakers who are not the mother of the focal child. However BMI was only constructed for PCGs who were the biomother, therefore Table 17 and 18 show data gathered for mothers only.

Table 17: PCG Anthropomorphic Flag Values (ch4mflag)

PCG Flag Values		N	%
0	No indices flagged, measures plausible	2,206	94.8
1	Missing weight or height	109	4.7
5	Height implausible (too tall or too short)	12	0.52
6	Weight implausible (too heavy or too light)	1	0.04
		2,328	100

The BMI or Quetelet index of the mother was computed as the weight in kilograms divided by the square value of the height in meters (kg/m^2). BMI has been used as a universal measure of obesity. Value of BMI was set to missing if either height or weight was determined as implausible. The implausible height or weight values, however, remained in the data. Data users may consider using the indicator variable ch4mflag to exclude records having implausible height or weight in the analyses.

The Food and Agriculture Organization (FAO) criteria were used to assess the nutritional status of the mothers based on the BMI index. Index with value up to 18.69 was considered as malnourished, between 18.70 and 23.89 as eutrophic, between 23.90 and 28.59 as overweight, and above 28.59 as obese. Table 18 presents the nutritional status of the mothers based on the body mass index.

Table 18: Nutritional Status of PCG's BMI

Status	N	%
Malnourished	58	2.6
Eutrophic	420	19.1
Overweight	605	27.4
Obese	1,122	50.8
Total	2,205	100

Table 19: Constructed variables for height and weight measurements

Constructed Variable	Description of Constructed Variable
ch4agemos	Age of child (months)
ch4cwtkg	Child weight (kilograms)
ch4cwtlb	Child weight (pounds)
ch4chtcm	Child height (centimeters)
ch4cbmi	Child's Body Mass Index
ch4cbmi_z	Z-score of Child's BMI or Child's BMI Index
ch4cbmi_p	Child's BMI percentile
ch4mombmi	PCG's Body Mass Index
ch4mombmi_z	Z-score of PCG's BMI
ch4mompreg	Indicates whether PCG was pregnant during survey
ch4waz	Child's weight for age standardized (z-score)

Constructed Variable	Description of Constructed Variable
ch4wap	Child's weight for age percentile
ch4whp	Child's weight for height percentile
ch4haz	Child's height for age standardized (z-score)
ch4hap	Child's height for weight percentile
ch4whp	PCG's weight for height percentile
ch4whz	PCG's weight for height standardized (z-score)
ch4cflag	Indicator flag for issues in child's measurements
ch4mflag	Indicator flag for issues in PCG's measurements
ch4selfwt	PCG reported weight (not measured)
ch4selfht	PCG reported height (not measured)
ch4mwtkg	PCG's weight (kilograms)
ch4mwtlb	PCG's weight (pounds)
ch4mhtcm	PCG's height (centimeters)

11.2. Constructed Variables - Accidents occurred to the child

- **cp4accdt** number of accidents occurred to the child

cp4accdt is based on the recollection of the PCG when being asked about the three most-recent accidents happened to the child. This was created by totaling the affirmative responses provided for a series of questions about the accidents listed under item a21 in the instrument used for the PCG survey.

11.3. Concept – Alcohol Use

11.3.1. Variables

Mother questions: **m4j20, m4j20a, m4j21** (3 variables)
Father questions: **f4j20, f4j20a, f4j21** (3 variables)

The Year 5 Core Survey includes a subset of three questions indicating alcohol use from the Composite International Diagnostic Interview - Short Form (CIDI-SF). Year 5 surveys do not contain the full CIDI-SF Alcohol and Drug Dependence Scales.

11.3.2. Modifications

The Year 5 survey is not comparable to the Year 1 and Year 3 Surveys in its measurements of alcohol and drug dependence. The Year 5 survey only includes questions regarding the frequency of alcohol use in the last twelve months and one of the seven symptoms (role interference as a result of use). Consequently, alcohol dependence caseness cannot be determined from the Year 5 survey.

The table below reports how many mothers and fathers report having at least four drinks in one day in the last twelve months at Year 5. We refer to these parents as "alcohol users."

Table 20: Alcohol Use in the Year 5 Survey

Alcohol User	Year 5 Mothers	Year 5 Fathers
Yes (1)	472	878
No(0)	3,654	2,263
Totals	4,126	3,141

11.4. Concept – Drug Use

11.4.1. Variables

Mother questions: **m4j22a, m4j22b, m4j22c, m4j22d, m4j22e, m4j22f, m4j22g, m4f22h, m4f22i, m4f22j, m4j22k, m4j23**
Father questions: **f4j22a-f4j22k; f4j23**

The Year 5 Core Survey includes a subset of 11 questions indicating drug use from the Composite International Diagnostic Interview - Short Form (CIDI-SF). Year 5 Core surveys do not contain the full CIDI-SF Alcohol and Drug Dependence Scales.

11.4.2. Modifications

The Year 5 Core surveys only include questions regarding the use of the 9 drugs and 1 of the 7 symptoms (role interference as a result of use). Consequently, drug dependence caseness cannot be determined. The surveys include an additional question regarding how often each parent used any of the drugs in the past 12 months. Table 21 reports how many mothers and fathers report using any drugs in the last twelve months at Year 5. Table 22 reports the average number of drugs used by parents who reported drug use.

Table 21: Drug Use in the Year 5 Survey

Drug User	Year 5 Mothers	Year 5 Fathers
Yes (1)	224	369
No(0)	3,915	2,790
Totals	4,139	3,159

Table 22: Average Number of Drugs Used Among Drug Users

	Year 5 Mothers	Year 5 Fathers
# of Drugs Used (average)	1.37	1.38
(standard deviation)	(0.85)	(0.85)
Total Users	224	369

11.5. Scale – Mental Health Depression (CIDI-SF)

11.5.1. Variables

Mother questions: **m4j5-m4j12; m4j13-m3j13a; m4j14-m4j14a; m4j15-m4j17** (15 variables)
Father questions: **f4j5-f4j12; f4j13-f3j13a; f4j14-f4j14a; f4j15-f4j17** (15 variables)

Constructed: **cm4md_case_lib**/**cf4md_case_lib** mother/father meets depression criteria (liberal); **cm4md_case_con** and **cf4md_case_con** mother/father meets depression criteria (conservative)

The Major Depressive Episode questions from the Year 5 Core Survey are derived from the Composite International Diagnostic Interview - Short Form (CIDI-SF), Section A.[14] The short form of the CIDI interview takes a portion of the full set of CIDI questions and generates from the responses the probability that the respondent would be a "case," (i.e., a positively diagnosed respondent), if given a full CIDI interview.

The CIDI questions are consistent with the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV).[15] The CIDI is a standardized instrument for assessment of mental disorders intended for use in epidemiological, cross-cultural, and other research studies.

Respondents are asked whether they have had feelings of dysphoria (depression) or anhedonia (inability to enjoy what is usually pleasurable) in the past year that lasted for two weeks or more, and if so, whether the symptoms lasted most of the day and occurred every day of the two week period. If so, they were asked more specific questions about: 1) losing interest, 2) feeling tired, 3) change in weight, 4) trouble sleeping, 5) trouble concentrating, 6) feeling worthless, and 7) thinking about death.

11.5.2. Modifications

All of the essential CIDI-SF questions to score a major depressive episode are included in the Year 5 survey. A few questions are omitted. These omitted questions deal with persistence, recency, and impairments associated with major depression and the subject's contact with a health care provider or other professional. The omitted questions play no part in generating predicted probabilities for the presence of disorders.[16]

[14] Kessler, R.C., Andrews, G., Mroczek, D., Ustun, T.B., & Wittchen, H.U. (1998). The World Health Organization Composite International Diagnostic Interview Short-Form (CIDI-SF). International Journal of Methods in Psychiatric Research, 7, 171-185.
[15] American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders, Fourth Edition. Washington, DC: American Psychiatric Association.
[16] Walters, E.E., Kessler, R.C., Nelson, R.C., & Mroczek, D. (2002). Scoring the World Health Organization's Composite International Diagnostic Interview Short Form (CIDI-SF; Dec 2002). For a copy of this memo please contact ffdata@princeton.edu.

11.5.3. Scoring Information

Note: The scoring procedures described below rely primarily on memos issued by Kessler and Mroczek in 1994 and 1997[17]. In 2002, Walters et al. issued "*Scoring the World Health Organization's Composite International Diagnostic Interview Short Form*" which recommends scoring procedures that differ in two respects. In the following, we note where the procedures used to identify major depression in the FFCWS respondents deviate from the 2002 version. When procedures are consistent, language is taken directly from the 2002 scoring guide.

Section A of the CIDI-SF is used to classify respondents according to the criteria for a DSM-IV major depressive episode. No distinction is made between respondents with major depressive disorder, major depressive episodes that occur as part of a bipolar disorder, or major depressive episodes that occur in the course of psychotic disorders.

There are two ways to meet the diagnostic stem requirement for Major Depression (MD) either:

1) to endorse all questions about having two weeks of dysphoric mood (J5-J6-J7) or
2) to endorse all questions about having two weeks of anhedonia (J9-J10-J11)

Consistent with the procedures described by Kessler and Mroczek, each series requires the respondent to report two weeks of symptoms lasting at least about half of the day (J6, J10) and almost every day (J7, J11).

Either denying the existence of the symptom or denying persistence leads to a skip, and the respondent receives a probability of caseness equal to zero. If respondents endorsed the dysphoric stem, they were not asked the anhedonia stem questions.

Note that the scoring instructions issued by Walters et al. creates more stringent conditions for endorsing the stem; respondents must report the two weeks of symptoms last at least "most of the day" in questions J6 and J10. As a consequence, the approach used here results in more respondents endorsing the stem than would endorse if the 2002 revisions were employed.

If the respondent endorses the diagnostic stem series, an additional seven symptom questions are asked:

1) losing interest (J8=1, only if the stem involves dysphoria; the anhedonia stem question J9=1 should be counted when the anhedonia stem is endorsed),
2) feeling tired (J12=1),
3) change in weight greater than or equal to 10 pounds (J13=1, 2, or 3 and J13A>=10),
4) trouble with sleep (J14=1 and J14A=1 or 2),
5) trouble concentrating (J15=1),
6) feeling down (J16=1), and

[17] Personal communications from Ron Kessler and Dan Mroczek, "Scoring the UM-CIDI Short Forms," revised 2/22/94, and "UM-CIDI Short Form 03.20/97, Kessler and Mroczek – DSM-IV Version."

7) thoughts about death (J17=1). The respondent's MD score (range 0-8) is then calculated as the sum of positive responses to each of these seven symptom questions and the first dysphoric stem question (J5).

Note that the scoring scheme proposed by Walters et al. excludes J5 from the symptom count, leading to an MD score range of 0-7.

Table 23 shows the cross-classification of MD short-form scores with the probability of being a CIDI case.[18] This cross-classification reflects the probability that a respondent with a particular response profile will meet full diagnostic criteria when given the complete CIDI interview.[19] As shown in the table, the probability of being a CIDI case is related to the MD score with the probability of being a case being greater than 0.5 among respondents who endorsed three or more symptoms.

There are two scoring alternatives for the CIDI-SF MD section. The first is to create a dichotomous score, classifying respondents as either probable cases or probable non-cases based on whether or not they have a MD score of three or more. The second is to assign respondents the probability of caseness score. Note that respondents who denied the MD stem questions or otherwise skipped out of the section prior to assessing the symptoms in the MD score receive a probability of caseness equal to zero.

A Memo Edit issued by Kessler in December 2002 indicates that subjects who volunteer they are taking medication for depression (J5 or J9=-14) should be counted as depressed. Note that while they receive a positive score for caseness, they are not asked any of the seven symptom questions.

Table 23: Major Depression (MD) Liberal Caseness

Short form MD Score	Probability of CIDI Caseness	Year 5 Mothers	Year 5 Fathers
0	0.0001	3,405	2,755
1	0.0568	9	12
2	0.2351	19	18
3	0.5542	38	31
4	0.8125	81	52
5	0.8895	149	78
6	0.8895	190	83
7	0.9083	177	78
8	0.9083	61	39
Totals		4,129	3,146

[18] For the distributions in Tables 23 and 24, respondents who did not know or refused to answer the initial dysphoria or anhedonia screening questions (J5 and J9= -1 or -2) are considered missing. Respondents who answered the initial screening questions but did not report how much or how often they experienced the state are scored as not meeting the stem.

[19] Please note: Kessler urges caution when interpreting the probability of caseness. The probabilities are derived from a single sample and have not been validated.

Table 24: Major Depression (MD) Liberal Caseness

MD Caseness	Year 5 Mothers	Year 5 Fathers
Yes (1)	702	364
No (0)	3,427	2,782
Totals	4,129	3,146

11.6. Scale – Family Mental Health History

11.6.1. Variables

Mother questions:

- *About mother's biological father:* **m4j26, m4j26a, m4j26b, m4j27, m4j27a, m4j27b, m4j28, m4j28a, m4j28b, m4j29, m4j29a, m4j29b**
- *About mother's biological mother:* **m4j31, m4j31a, m4j31b, m4j32, m4j32a, m4j32b, m4j33, m4j33a, m4j33b, m4j34, m4j34a, m4j34b**

Father questions:

- *About father's biological father:* **f4j26, f4j26a, f4j26b, f4j27, f4j27a, f4j27b, f4j28, f4j28a, f4j28b, f4j29, f4j29a, f4j29b**
- *About father's biological mother:* **f4j31, f4j31a, f4j31b, f4j32, f4j32a, f4j32b, f4j33, f4j33a, f4j33b, f4j34, f4j34a, f4j34b**

The questions on family mental health history (addressing the mental health of the FFCWS respondents' mothers and fathers) are derived from the National Comorbidity Survey (NCS). The NCS is a collaborative epidemiological investigation designed to study the prevalence and correlates of DSM III-R disorders and patterns and correlates of service utilization for these disorders. The NCS was the first survey to administer a structured psychiatric interview to a nationally representative sample.

A two-phase sample design was used in the NCS. The questions in the FFCWS Surveys derive from Part II of the NCS survey.[20] The Part II interview contained a section evaluating the history of five psychiatric disorders in respondents' natural mothers and fathers. The five disorders are: major depression (MD), generalized anxiety disorder (GAD), antisocial personality disorder (ASP), alcohol abuse/dependence (AAD), and drug abuse/dependence (DAD).[21] The FFCWS survey does not incorporate the questions on ASP. Like the NCS, FFCWS also addresses attempted suicide.

11.6.2. Modifications

Aspects of the Family History questions that are part of the NCS have been altered in the FFCWS Survey. Specifically, the FFCWS survey asks the preliminary questions regarding the respondent's family history but does not include subsequent questions which evaluate the symptoms and social problems associated with the disorders (X3, X6, X8, X11, X16, X19, X20-25, X29, X32, X34, X37, X42, X45 and X46-51).

11.6.3. Scoring

Those questions which were omitted are critical to the scoring of the NCS, and therefore exclude the possibility of a comparable scoring procedure for the FFCWS study.[22] One

[20] The NCS survey instrument is available at http://www.hcp.med.harvard.edu/ncs/Baseline_NCS.php . Section X contains family history questions used in Fragile Families.

[21] Kendler, K.S., Davis, C.G., Kessler, R.C. (1997). The familial aggregation of common psychiatric and substance use disorders in the National Comorbidity Survey: a family history study. *British Journal of Psychiatry* 170:541- 548

[22] For a description of procedures used to score MD, AAD, ASP and DAD in the NCS, see Endicott J., Andreasen, N. and Spitzer, R. L. (1978) *Family History Research Diagnostic Criteria*. New York: Biometrics Research Department, New York State Psychiatric Institute. For a description of procedures used to score GAD, see Kendler, K.S., Neale, M. C. Kessler, R. C., et. Al. (1992)

potential approach is to treat responses as symptom counts and simply sum them, however we make no official recommendations on how to score these items.

12. Cognitive and Behavioral Assessments

In Year 5 assessments were administered to the primary caregiver (PPVT or TVIP) and/or child (PPVT/TVIP and Woodcock-Johnson) in order to describe their cognitive ability. Survey questions regarding cognitive and behavioral development were also asked of the mother, father, PCG, and teacher and included questions about impulsivity, internalizing behavior, externalizing behavior, delinquency and time-use. The following table displays in which survey one might find variables related to cognitive and behavioral development.

Table 25: Subtopics in Cognitive and Behavioral Assessments in Year 5

Subtopics	**m**	**f**	**p**	**h**	**o**	**t**
Behavior	X	X	X	X	X	X
Cognitive Skills				X		

12.1. Scale – Peabody Vocabulary Test (PPVT) & Test de Vocabulario en Imagenes Peabody (TVIP)

PPVT and TVIP were administered at the respondent's residence. Child's scores were computed based on the information recorded for Section B of the In-Home Activity Workbook. PCG's scores were computed based on information recorded for Section G of the In-Home Activity Workbook. The survey firm MPR developed these scores.

The following variables were created:

12.1.1. PCG's PPVT scores

- **ch4ppvtparent** PCG participated in PPVT/TVIP
- **ch4ppvtraw_m** PCG's raw PPVT score
- **ch4ppvtstd_m** PCG's standardized PPVT score
- **ch4pvbasal_m** PCG's PPVT basal value
- **ch4pvceil_m** PCG's PPVT ceiling value

The following variables were created to mark irregular PPVT administrations:

- **ch4pvnbasal_m** indicator variable whose value is 1 if no basal was reached
- **ch4pvtwceil_m** indicator variable whose value is 1 if two ceilings were reached.
- **ch4pvceilr_m** indicator variable whose value is 1 if the last block was administered because no ceiling was reached. This block was used for calculating the raw PPVT score in ch4ppvtraw_m.
- **ch4pvpercom_m** percent of items used for total score missing. If a high percent of the items is missing, PPVT raw score and standard score should not be used.

12.1.2. PCG's TVIP scores

- **ch4tvipraw_m** PCG's raw TVIP score
- **ch4tvipstd_m** PCG's standardized TVIP score
- **ch4tvbasal_m** PCG's TVIP basal value.
- **ch4tvceil_m** PCG's TVIP ceiling value.

The following variables were created to mark irregular TVIP administration:

- **ch4tvmis_m** number of missing items between the basal and the ceiling.
- **ch4tvnbasal_m** all records with no basal before adjustment. If no basal could be calculated, records were flagged and the basal was adjusted to 91.
- **ch4tvinback_m** interviewer back tested before item 91 but did not reach basal.
- **ch4tvnback_m** interviewer started at item 91, did not reach a basal and did not back test.
- **ch4tvback91_m** interviewer started at item 91, did not reach basal on first 8 items but reached basal after 91.
- **ch4tvnceil_m** if no ceiling was reached and test not administered to end.

12.1.3. Child's PPVT Scores

- **ch4ppvtkid** child participated in PPVT
- **ch4ppvtraw** child's raw PPVT score.

- **ch4ppvtstd** child's standardized PPVT score.
- **ch4pvbasal** child's PPVT basal value
- **ch4pvceil** child's PPVT ceiling value

The following variables were created to mark irregular administrations:

- **ch4pvtwceil** indicator to identify if two ceilings were reached.
- **ch4pvnceil** no ceiling was reached.
- **ch4pvceilr** last block administered if no ceiling was reached. This block was used for calculating ch3ppvtraw.
- **ch4pvpercom** percent of items for total score missing. If a high percent of the items is missing, total raw and standard score should not be used.

12.1.4. Scoring PPVT & TVIP

The following section provides information on how PPVT/TVIP scores (basal, ceiling, raw and standardized) were constructed. The raw data used to construct these variables is not released in public FFCWS data

This explanation focuses on scoring and assumes some familiarity with the PPVT test materials and basic administration. Technical information (test construction and standardization, norm development, reliability and measurement error, and validity) is covered at length in Part 3 of the Examiner's Manual.[23] It will be helpful to refer to the "Practice Exercises Worksheet" on page 27.

Part 1: Calculating a raw score

There are two parts of this process, a) establishing a Basal and b) calculating a Ceiling.

Establishing a Basal - The Basal is the lowest set of items administered containing fewer than two errors. For the Year 5 In-Home Survey, respondents fell into two categories: the children, who were in the "age 2.6 - 3" category and therefore started with item one (the first set is always their basal); and the PCGs, who were in the "ages 17 - adult" category and therefore began with item 145 on set 13. This set did not necessarily set the adult's Basal; if she/he made more than one error in the set (items 145-156) the examiner administered lower sets (set 12, set 11, etc.) until the respondent completed a set with no more than one error – this set was then the respondent's Basal (set 13 was an adult's Basal if she completed the set with no errors or one error).

Calculating the Ceiling – Once a Basal was established, the examiner administered higher sets of items until the respondent (child or adult) made eight or more errors in a set. The examiner always completed administering a set of items, even if the respondent made eight errors before all items in the set have been administered. The highest set administered containing eight or more errors was the Ceiling Set; the last item in this set was the "Ceiling Item." N.B. This can be confusing – for example, if an adult began with set 13, made eight errors (no Basal) and was therefore given set 12, where he also made eight errors, then he moved to set 11, at which point the adult

[23] Dunn, L.M. and L.M. Dunn (1997). Examiner's Manual for the Peabody Picture Vocabulary Test, Third Edition. American Guidance Services, Inc.

completed this set without making any errors (establishing a Basal), his Ceiling Set was 13, not 12, and the Ceiling Item was 156.

Once Basal and Ceiling Sets are established, calculating the raw score is a straightforward process: add up all errors in every set that was administered and then subtract the total from the ceiling item. There are several practice exercises in the examiner's manual that illustrate both simple and more complex scoring scenarios.

Part 2: I have a raw score. Now what?

A Norms Booklet included with the PPVT Test Kit includes a set of tables for easy conversion from raw scores to standard score equivalents by age, percentile ranks, normal curve equivalents, stanines, and age equivalents. The Examiner's Manual also provides directions for how to obtain reliability confidence bands for most of these measures. As noted earlier, the Examiner's Manual, Part 2, Section D (pp. 26-35) provides a set of exercises that can help curious minds learn how to determine Basal and Ceiling Sets, calculate raw scores, locate and record normative scores, and estimate reliability confidence bands.

There are two parallel PPVT-III forms, IIIA and IIIB. For the pilot, we used only IIIA.

Part 3: Great. So what about the TVIP?

Test de Vocabulario en Imagenes Peabody (TVIP) is a measure of receptive vocabulary for Spanish-speaking children and adolescents. It was developed from parallel forms of a past edition of the PPVT using the most appropriate items for the Spanish population. You cannot directly correlate the PPVT and TVIP because they were normed on separate populations in different languages.

In contrast to the PPVT's 408 items (204 on form IIIA and 204 on form IIIB), the TVIP offers a single form with 125 items. It is appropriate for ages 2.5-18, while the PPVT includes national norms for ages 2.5-90+.

Scoring for the TVIP differs from scoring for the PPVT in several important ways. The most important are the following: a) a Basal for the TVIP is the highest eight consecutive correct responses; and b) the Ceiling is the lowest eight consecutive responses containing six errors. To help understand these basic rules, several illustrative examples are included on pp. 15-23 of the TVIP Examiner's Manual – English Edition.[24]

There will be several sources of confusion as a result of these differences for those familiar with only the rules for scoring the PPVT. For one, in the TVIP only errors made after the Basal are included in the error count used in determining the raw score (contrast with the PPVT rules that you must use the lowest Basal Set and include errors in every set that has been administered). The rule governing Ceilings is also a bit awkward in that without "sets" per se the examiner must constantly look at the current question as well as the preceding seven items to determine when the respondent has answered six of eight items incorrectly. Also, without pre-established "sets," as soon as a respondent

[24] Dunn, L.M., E.R. Padilla, D.E. Lugo, and L.M. Dunn (1986). Examiner's Manual for the Test de Vocabulario en Imagenes Peabody: Adaptacion Hispanoamericana (English-Language Edition). American Guidance Services, Inc.

gets one of the first eight items wrong, the interviewer must backtrack question by question until the respondent puts together a string of eight correct responses to establish a Basal. Thankfully, with the Basal and Ceiling established, the raw score is calculated as with the PPVT: Ceiling Item minus errors (remember, the TVIP only uses errors above the Basal) equals raw score.

More technical information for the PPVT-III is and TVIP is available online.

12.1.5. Scale – Woodcock Johnson Letter-Word Identification Test (W-J Test 22)Variables

- **ch4wjraw22** Total items correctly answered (item c1 to c57 under Activity C in the workbook).
- **ch4wjsc22** W-J total score which is a conversion from the total raw score (ch4wjraw22) in order to derive other scores or measures.
- **ch4wjrmi22** Relative mastery index or the proportion that the child can do (based on the W-J test) relative to 90% of the children of his or her age.
- **ch4wjss22** W-J standard score which is an important and most useful number. It is a statistically derived number that describes an individual's performance relative to peers of the same age.
- **ch4wjpr22** W-J percentile rank. Value of this variable provides the same information as standard score expressed in a percentage. This is used to rank an individual relative to his/her age peers.

The Woodcock-Johnson Letter-Word Identification Test or Test 22 (W-J Test 22)[25] was administered to the focal child during the In-Home Activities. Scores were derived on the raw score recorded for each item c1-c57 included for Activity C in the activity workbook.

The first 5 items of this subtest include symbolic learning, or the ability to match a pictorial representation of a word with an actual picture of the object. The remaining 52 items (total = 57) assess the child's reading skills in identifying isolated letters and words that are presented in large type on the subject's side of the test book. The items are arranged in order of difficulty, with the easiest items presented first and the most difficult items last.

12.1.6. Scoring

This section describes how the constructed variables listed above were constructed. Only the constructed scores, not raw data points, are included in the Year 5 file for the W-J Test 22.

W-J Test 22 has standardized scoring protocols. It was designed to provide a normative score that shows the child's ability to recognize letters and words, as well as, the match skills in comparison to the national average performance of children of similar ages. The normed scores are constructed based on the focal child's raw score on the test (the number of correct items completed) and the child's age, to the nearest month, at time of assessment. Raw scores are charted on normative tables based on the child's age and what percentile the child falls into.

The first step in creating standardized test scores for the W-J Test 22 was to compute the total raw score, based on the number of items answered correctly. The second step was to calculate the subjects' age at the time of testing. This was accomplished by

[25] Woodcock, R. W., McGrew, K. S., & Mather, N. (2001). *Woodcock-Johnson III Tests of Achievement*. Itasca, IL: Riverside Publishing.

subtracting their birth date from the assessment date and then converting the difference in days to age in months. Total raw score and age were then entered into the Woodcock Compuscore and Profile software to generate the normative score and related statistics. In the process, the raw score of the test was matched to an intermediate number known as the W Score. The intermediate step allowed standardization across the different forms, if used, for the W-J battery of tests. The W Score was then compared against the Reference W Score, which is the average W Score for a child in the age group.

12.2. Scale – Sustained Attention Task (Leiter-R)

During the Year 5 In-Home Study, interviewers administered the sustained attention task from the Leiter International Performance Scale (Leiter-R). The task assesses children's ability to maintain attention on specific stimuli over time,[26] and includes two aspects of sustained attention—focused attention and lack of impulsivity.[27],[28]

For this task, children were shown a picture booklet with a variety of different objects placed throughout the page. There is a target picture at the top of each page and the goal of the task is to put a line through as many of the target pictures as possible within the allotted time, taking care not to erroneously cross out a non-target object.

12.2.1. Variables

- **ch4lr_age** Age of child at assessment
- **ch4lr_totmarkd** Total number of marks
- **ch4lr_totcorrt** Total number correct
- **ch4lr_toterror** Total number errors
- **ch4lr_adjcorrt** Adjusted total correct
- **ch4lr_corscor** Total correct scaled score (Focused Attention)
- **ch4lr_errscor** Total errors scaled score (Lack of Impulsivity)
- **ch4lr_adjscor** Adjusted total correct scaled score
- **ch4lr_diffscor** Difference score (potential ADD/ADHD problem)

12.2.2. Scoring

The Leiter-R variables were constructed using 3 steps. See articles cited above by Martin, Razza, and Brooks-Gunn, and Razza, Martin, & Brooks-Gunn for examples of how to use focused attention and lack of impulsivity variables.

Step 1: Scoring

This section describes how the constructed variables listed above were constructed. Only the constructed scores, not raw data points, are included in the Year 5 file for the Leiter-R.

The total number of marks on each page was counted for all four parts.
Four raw scores were calculated:
1. total number of marks (*ch4lr_totmarkd*) - a sum of ALL marks across the four parts (from a above)
2. total number correct (*ch4lr_totcorrt*) - a sum of CORRECT marks across the four parts (from b above)
3. total number of errors (*ch4lr_toterror*)- this is a sum of all errors and is calculated as follows: *ch4lr_toterror = ch4lr_totmarkd – ch4lr_totcorrt*

[26] Roid, G. H., Miller L. J. Leiter International Performance Scale--Revised. Wood Dale, IL: Stoelting; 1997
[27] Martin, A., Razza, R. A., & Brooks-Gunn, J. (2012). Sustained attention at age 5 predicts attention-related problems at age 9. International Journal of Behavioral Development, 36(6), 413-419.
[28] Razza, R. A., Martin, A., & Brooks-Gunn, J. (2010). Associations among family environment, sustained attention, and school readiness for low-income children. Developmental Psychology, 46(6), 1528-1542.

4. adjusted correct (*ch4lr_adjcorrt*) – this is the total number correct adjusted for the total number of errors and is calculated as follows: *ch4lr_adjcorrt = ch4lr_totcorrt - ch4lr_toterror*

Step 2: Scaling:

The raw scores from Step 1 are converted into standardized scores
Scaling requires the following information:
1. the three scores calculated in #2-4 above (*ch4lr_totcorrt, ch4lr_toterror, ch4lr_adjcorrt*)
2. the child's chronological age on the day of the assessment
3. the scaling tables (Appendix B & C) from the Leiter examiner's manual

The following three scaled scores are derived using the above information:
1. adjusted correct scaled score (*ch4lr_adjscor*) – this is the scaled score that is typically reported in the literature. To obtain this value:

- open Appendix B of the Leiter examiner's manual and find the age-appropriate table (i.e., Table B-13 for children 4 years, 0 months through 4 years, 2 months)
- under the column heading "Attention Sustained" find the row with the *ch4lr_adjcorrt* (#4 under Step 1) score value for that child (i.e., a raw score of 20 falls within the row for "19-22")
- look across the row to the "Scaled Score" column and record the value at the intersection of this column and the appropriate row (i.e., in this example, the *ch4lr_adjscor* is "9")

2. total correct scaled score (*ch4lr_corscor*) – this is the first of two scaled scores used for clinical diagnosis. To obtain this value, follow these steps:

- open Appendix C of the Leiter examiner's manual and find the age-appropriate table (i.e., Table C1.13 for children 4 years, 0 months through 4 years, 2 months)
- under the column heading "Atten Sustain. Total Correct" find the row with the *ch4lr_totcorrt* (#2 under Step 1) score value for that child (i.e., a raw score of 15 falls within the row for "13-16")
- look across the row to the "Scaled Score" column and record the value at the intersection of this column and the appropriate row (i.e., in this example, the *ch4lr_corscor* is "6")

3. total error scaled score (*ch4lr_errscor*) - this is the second of two scaled scores used for clinical diagnosis. To obtain this value, follow these steps:

- open Appendix C of the Leiter examiner's manual and find the age-appropriate table (i.e., Table C1.13 for children 4 years, 0 months through 4 years, 2 months)
- under the column heading "Atten Sustain. Total Errors" find the row with the *ch4lr_toterror* (#3 under Step 1) score value for that child (i.e., a raw score of 3 falls within the row for "3-4")
- look across the row to the "Scaled Score" column and record the value at the intersection of this column and the appropriate row (i.e., in this example, the *ch4lr_errscor* is "10")

Step 3: Clinical Significance:

Determine if scores from Step 2 meet clinical criteria.

To determine whether a child's performance suggests ADD/ADHD:
1. compute a **difference score** (*ch4lr_diffscor*) – this score is calculated as follows:
ch4lr_diffscor = ch4lr_errscor – ch4lr_corscor
2. interpret the diffscor (based on Table F3.2):
- if the *ch4lr_diffscor* >= 4, then this indicates a potential ADD or ADHD problem.
- if the *ch4lr_diffscor* < 4, then this suggests no problem

12.3. Scale – Impulsivity

12.3.1. Variables

Questions to mother, asked about mother: **m4j25a1, m4j25a2**
Questions to mother, asked about father: **m4c40a, m4c40b**
Questions to father[29], asked about father: **f4j25a1, f4j25a2**
Questions to father, asked about mother: **f4c40a, f4c40b**

The impulsivity questions included in the Year 5 Core were derived from Dickman's[30] impulsivity scale. Only 2 of the 23 items in Dickman's full impulsivity scale are included.

12.3.2. Modifications

Scott J. Dickman designed a scale to identify two types of impulsivity: functional and dysfunctional. The FFCWS Survey includes questions pertaining only to dysfunctional impulsivity, which is associated with the tendency to deliberate less than most people of equal ability before taking action when this is not optimal. The measure of dysfunctional impulsivity provides a useful summary measure of the capacity for self-control. The full impulsivity scale developed by Dickman consists of 23 items. The Core Year 5 survey includes two of these items. The variables are coded on a 4-point Likert scale (1=strongly agree and 4- strongly disagree).

Table 26: Dickman's Impulsivity Scale Variables Included in Year 5

Variables	Source Item
m4j25a2; f4j25a2; m4c40b; f4c40b	I often get into trouble because I don't think before I act.
m4j25a1; f4j25a1; m4c40a; f4c40a	I often say and do things without considering the consequences.

[29] A more detailed measure of father's impulsivity is obtained at Year 1.
[30] Dickman, S.J. (1990) Functional and Dysfunctional Impulsivity: Personality and Cognitive Correlates. Journal of Personality and Social Psychology, 58, 95-102.

12.4. Scale – Child Behavior Problems (CBCL)

This measure includes some of the items and scales from the Child Behavior Checklist (CBCL/4-18).[31] The purpose of this assessment was to obtain parental ratings of children's behavioral problems and prosocial behavior.

The original CBCL/4-18 consists of 113 behavior problem items on which a parent, or parent surrogate, is asked to rate their child's behavior. Our Year 5 PCG survey (section L) and the corresponding core mother survey (section B) include 72 of the original items. Items were read to each mother or PCG, who was asked to indicate whether the statement was not true (0), sometimes or somewhat true (1), or very true or often true of her child (2).

Relatively few well-standardized behavioral measures are available for young children. Achenbach's *Child Behavior Checklists* are the most widely used scales for assessing problematic behavior, with versions available for preschoolers as well as older children, and for teacher- as well as parent-report. They provide subscales for different subtypes of problems and are supported with extensive normative data.

The child behavior items included in the Year 5 surveys were selected from two established child behavior measures, the CBCL and ASBI (see section 12.6) to cover constructs of interest (aggressive, delinquent behavior, anxious/depressed behavior, social withdrawal, social problems, need for mental health services, and social competence) while providing comparability with several other studies. The included items should allow adequate comparisons with some other major studies such as the Fast Track survey and the Longitudinal Studies of Child Abuse and Neglect (LONSCAN) Assessments.

12.5.1 Variables

Mother survey: **m4b4b-m4b4b4, m4b4b6, m4b4b7, m4b4b9, m4b4b11-m4b4b19, m4b29a1-m4b29a4, m4b29a6, m4b29a7, m4b29a9, m4b29a11-m4b29a19** (32 variables)

PCG survey: **p4l1, p4l2, p4l4-p4l10, p4l12-p4l14, p4l16-p4l29, p4l31, p4l33-p4l40, p4l42-p4l47, p4l49, p4l50, p4l52-p4l54, p4l56, p4l57, p4l59, p4l61, p4l62, p4l64, p4l65** (53 variables)

12.5.2. Modifications

Because of time constraints, the entire CBCL could not be administered, and choice of items was complicated by changes in the content of subscales between 1991 and 2000. Our Year 5 PCG survey (section L) and the corresponding core mother survey (section B) include 72 of the original items.

Specifically, we exclude most items associated with somatic problems and those not applicable for very young children in our study such as items with contents related to drugs/alcohol use, school skipping, and sexual behaviors.

[31] Achenbach, T.M. (1992). Manual for the Child Behavior Checklist / 2-3 and 1992 Profile. Burlington, VT: University of Vermont Department of Psychiatry.

Selected items in the CBCL comprise the following eight constructs or syndromes: Social Withdrawal, Somatic Complaints, Anxiety/Depression, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. The Anxious/Depressed, Aggressive, and Withdrawn subscales include all of their component items from the CBCL 4/18. The Delinquent subscale includes 10 of 13 CBCL 4/18 Delinquent scale items. The excluded items are not applicable for young children in our study.

In addition, CBCL also allows examination of two broad groupings of syndromes: Internalizing Problems and Externalizing problems. The Internalizing scale does not include somatic complaints which are included in the Internalizing items from the CBCL 4/18. The Externalizing scale includes all but 3 of the CBCL 4/18 Externalizing scale items.

Table 27 presents items included in our survey based on selected subscales from the PCG survey as well as the mother survey. A summary of psychometrics for the behavior items are presented in Table 28. Note that since the full instrument was not administered, the psychometric property of the Achenbach-like subscales may differ from the original Achenbach's CBC.

12.5.3. Scoring

Scores for subscales can be calculated either by adding scores for each variable (allowing comparison to T-scores and percentiles for the normalization sample for each subscale – see below) or by averaging variable scores. All 72 items can be included to generate the total behavior score.

Table 27: CBCL Subscales and Diagnostics

Question	N	Variable
Anxious/Depressed (Full scale: 14 items)		
Complains of loneliness	2976	p4l5
Cries a lot	2832	m4b4b4; m4b29a4
Fears s/he might think/do something wrong	2970	p4l17
Feels s/he has to be perfect	2971	p4l18
Feels/complains no one loves him/her	2974	p4l19
Feels others out to get him/her	2973	p4l20
Feels worthless/inferior	2822	m4b4b18; m4b29a18
Nervous, high strung or tense	2827	m4b4b9; m4b29a9
Too fearful or anxious	2830	m4b4b14; m4b29a14
Feels too guilty	2970	p4l29
Self-conscious or easily embarrassed	2976	p4l43
Suspicious	2971	p4l53
Unhappy, sad or depressed	2831	m4b4b15; m4b29a15
Worries	2972	p4l65
Alpha on full sample = .70		
Withdrawn (Full scale: 9 items)		
Would rather be alone than with others	2973	p4l25
Refuses to talk	2975	p4l38
Secretive, keeps things to self	2970	p4l42

Question	N	Variable
Shy or timid	2977	p4l46
Stares blankly	2971	p4l47
Sulks a lot	2955	p4l52
Underactive, slow moving, lacks energy	2969	p4l61
Unhappy, sad or depressed	2831	m4b4b15; m4b29a15
Withdrawn, doesn't get involved with others	2826	m4b4b17; m4b29a17
Alpha on full sample = .61		
Attention Problems (Full scale: 11 items)		
Acts too young for age	2830	m4b4b19; m4b29a19
Can't concentrate	2830	m4b4b1; m4b29a1
Can't sit still	2830	m4b4b2; m4b29a2
Confused or seems to be in a fog	2975	p4l6
Daydreams or gets lost in his/her thoughts	2973	p4l8
Impulsive or acts without thinking	2974	p4l24
Nervous, high-strung or tense	2827	m4b4b9; m4b29a9
Nervous moment or twitching	2971	p4l27
Has poor school work	2948	p4l34
Poorly coordinated or clumsy	2976	p4l35
Stares blankly	2971	p4l47
Alpha on full sample = .71		
Social Problems (Full scale: 8 items)		
Acts too young for age	2830	m4b4b19; m4b29a19
Clings to adults or too dependent	2831	m4b4b3; m4b29a3
Does not get along with other kids	2829	m4b4b6; m4b29a6
Gets teased a lot	2974	p4l22
Not liked by other kids	2970	p4l28
Overweight	2971	p4l31
Poorly coordinated or clumsy	2976	p4l35
Prefers being with younger kids	2965	p4l37
Alpha on full sample = .43		
Aggressive (Full scale: 20 items)		
Argues a lot	2977	p4l1
Brags or boasts	2959	p4l2
Cruel, bullying or mean to others	2974	p4l7
Demands a lot of attention	2832	m4b4b16; m4b29a16
Destroys his/her own things	2975	p4l9
Destroys things belonging to family/others	2975	p4l10
Disobedient at home	2967	p4l12
Disobedient in school	2944	p4l13
Easily jealous	2975	p4l16
Gets in many fights	2976	p4l21
Physically attacks people	2974	p4l33
Screams a lot	2975	p4l40
Showing off/clowning	2970	p4l45
Stubborn/sullen/irritable	2826	m4b4b11; m4b29a11
Has sudden changes in mood or feelings	2831	m4b4b12; m4b29a12

Question	N	Variable
Talks too much	2972	p4l56
Teases a lot	2975	p4l57
Has temper tantrums or hot temper	2831	m4b4b13; m4b29a13
Threatens people	2974	p4l59
Unusually loud	2969	p4l62
Alpha on full sample = .84		
Delinquent behavior (10 of 13 items)		
Doesn't seem to feel guilt after misbehaving	2826	m4b4b7; m4b29a7
Hangs around w/ others who get in trouble	2975	p4l23
Lies or cheats	2975	p4l26
Prefers being with older kids	2968	p4l36
Runs away from home	2975	p4l39
Sets fire	2973	p4l44
Steals at home	2977	p4l49
Steals outside home	2972	p4l50
Swears or uses obscene language	2975	p4l54
Vandalizes	2968	p4l64
Alpha on full sample = .56		

Summary of psychometrics for the behavior items are presented in Table 28:

Table 28: Variables included for the CBCL 4/18 (1991) Subscales in the Year 5 Core and In-Home Interview

CBCL 1992 Subscale	Variables	Alpha[32]	N[33]	Mean (SD)	Range	Skew	Kurtosis[34]
Anxious/ Depressed	p4l5, m4b4b4, p4l17, p4l19, p4l20, m4b4b18, m4b4b9, p4l29, p4l43, p4l53, m4b4b15, p4l65	0.67	2,768	RAW: 3.39 (2.99)	0-20		
				AVG: .24 (.21)	0-1.43	1.29	5.05
Withdrawn	p4l25, p4l38, p4l42, p4l46, p4l47, p4l52, p4l61, m4b4b15, m4b4b17	0.60	2,782	RAW: 2.06 (1.99)	0-13		
				AVG: .23 (.23)	0-1.44	1.41	5.61

[32] Scale alphas are computed using only cases with valid responses on all items in the scale; for Anxious/Depressed, n = 2769; for Withdrawn, n = 2761; for Total Internalizing, n = 2725; for Aggressive, n = 2727; for Delinquent, n = 2775; for Total Externalizing, n = 2711; for Total CBCL, n = 2580

[33] Ns for each scale apply to the scale means, standard deviations, ranges, and skew and kurtosis statistics; they reflect the number of cases that have valid responses on at least 80% of the scale items; for cases with fewer than the total number of items, the raw score was multiplied by (total # scale items/case total # of items).

[34] Note that the computation also excluded 169 cases whose values for m4b4b11/m4b29a11, m4b4b12/m4b29a12, m4b4b13/m4b29a13, m4b4b16/m4b29a16 were completely missing. Kurtosis was evaluated as below. For STATA users:

$$kurtosis = \frac{n(n+1)}{(n-1)(n-2)(n-3)}\left(\frac{s4}{V(x)^2}\right) - 3\frac{(n-1)^2}{(n-2)(n-3)}$$

value in table + 3 = Stata's kurtosis value

Total Internalizing	Anxious/ depressed & withdrawn items (m4b4b15 included once)	0.75	2,746	RAW: 5.37 (4.26)	0-26		
				AVG: .24 (.19)	0-1.18	1.27	4.95
Aggressive	p4l1, p4l2, p4l7 , m4b4b16, p4l9, p4l12, p4l13, p4l16, p4l21, p4l33, p4l40, p4l45, m4b4b12, p4l56, p4l57, m4b4b13, p4l59, p4l62	0.85	2,747	RAW: 10.72 (6.35)	0-36		
				AVG: .266 (.211)	0-1.3	1.25	4.89
Delinquent	m4b4b7, p4l23, p4l26, p4l36, p4l39, p4l44, p4l49, p4l50, p4l54, p4l64	0.48	2,795	RAW: 1.89 (1.71)	0-12		
				AVG: .189 (.171)	0-1.2	1.46	6.37
Total Externalizing	Aggressive and delinquent items	0.86	2,699	RAW: 12.61 (7.5)	0-45		
				AVG: .42 (.25)	0-1.50	0.92	3.91
Total CBCL	Anxious/depressed, withdrawn, aggressive, delinquent items, and other problem items as listed in the LONGSCAN report 108 (page 230)	0.90	2808	RAW: 23.37 (13.46)	0-78.35		
				AVG: .325 (.19)	0-1.12	0.99	1.03
Attention Problems Subscale	m4b4b19, m4b4b1, m4b4b2, p4l6, p4l8, p4l28, m4b4b9, p4l27, p4l34, p4l35, p4l47	0.72	2758	RAW: 2.81(2.76)	0-17		
				AVEGD: .26 (.25)	0-1.55	1.44	5.65

12.5. Scale – Adaptive Social Behavior Inventory (ABSI)

12.5.1. Variables

PCG questions: **p4l3, p4l11, p4l15, p4l30, p4l32, p4l41, p4l48, p4l51, p4l55, p4l58, p4l60, p4l63, p4l66** (13 variables)

These items were adapted from the Express Subscale of the Adaptive Social Behavior Inventory (ASBI).[35,36] The ASBI is designed to be an educator's report of child social skills.

Section L of the PCG Survey includes 13 of the positive behavior items from the ASBI scale. The ASBI assesses multiple dimensions of social competence and includes subscales for two aspects of positive behavior, Express and Comply. Special attention is given to social behaviors, which may be influenced by educational/day care experiences.

12.5.2. Modifications

The three sub-scales of the inventory are Express, Comply and Disrupt. Comply subscale items overlapped with constructs covered in the CBCL; the Express subscale included unique, prosocial items and was chosen for use in this study. The Disrupt subscale includes only a few items which were not used in our survey.

Table 29: ASBI Variables at Year 5

Question	N	Variable
Positive Behavior (Full scale: 13 items; ASBI)		
Understands others' feelings	2975	p4l3
Sympathetic to other children's distress	2971	p4l11
Open and direct about needs	2976	p4l15
Will join a group of children playing	2975	p4l30
Plays games and talks with other children	2974	p4l55
Confident with other people	2975	p4l58
Tends to be proud of things s/he does	2970	p4l60
Interested in many different things	2971	p4l63
Enjoys talking with you	2964	p4l66
Easily gets other children's attention	2966	p4l41
Asks or wants to play with other children	2976	p4l51
Says "please" and "thank you"	2974	p4l48
In social activity, tends to just watch others	2968	p4l32
Alpha on full sample = .80		

[35] Hogan, A. E., Scott, K. G., & Bauer, C. R. (1992). *The Adaptive Social Behavior Inventory (ASBI): A new assessment of social competence in high-risk three-year-olds.* Journal of Psychoeducational Assessment, 10, 230-239.
[36] Hogan, A. E., Scott, K. G., & Bauer, C. R. (1997). Social competence: The Adaptive Social Behavior Inventory (ASBI). In R.T. Gross, D. Spiker, & C.W. Haynes (Eds.),

Psychometric data are available for both parent-report and teacher-report use of the ASBI.[26,37] A summary of psychometrics for the behavior items included in the FFCWS Year 5 are presented in Table 30.

Table 30: ASBI Express Subscale

CBCL 1992 Subscale	Variables	Alpha	N	Mean (SD)	Range	Skew	Kurtosis
ASBI Express Subscale	p4l3, p4l11, p4l15, p4l55, p4l58, p4l60, p4l63, p4l66, p4l41, p4l51, p4l48, p4l32	0.80	2,931	RAW: 20.76 (3.40)	0-26		
				AVEGD: 1.59(.26)	0-2.0	-1.44	5.63

Note: Variable p4l32 in ASBI scale has the codes reversed which has also been done based on the paper The Effects of the Peers Early Educational Partnership (PEEP) on Children's Developmental Progress" by Maria Evangelou and Kathy Sylva, Department of Educational Studies, University of Oxford, 2003.

[37] Greenfield, D.B., Wasserstein, S.B., Gold, S., & Jorden, B. (1997). The Adaptive Social Behavior Inventory (ASBI): Evaluation with high-risk preschoolers. Journal of Psychoeducational Assessment, 15, 322-333. Helping Low Birth Weight, Premature Babies (pp. 335-340), Stanford, CA: Stanford University Press.

13. Employment

At Year 5, the child's mother, father and PCG were asked about their employment. PCGs were administered an employment calendar, as part of the In-Home Activity Workbook, to record detailed data about their employment history. Mothers and fathers were asked questions about their type of employment, including traditional and non-traditional employment (including working for self, "hustles", and other work), and unemployment. In traditional work questions, respondents were asked about their regular forms of work, the typical times they spend at work and how often they've worked in the last year. Non-traditional work questions also included information about types of work and how much time was spent working these jobs. Questions related to unemployment included if the respondent was looking for a regular job, how long had they been looking and when they last received a regular paycheck. In work stress/flexibility, both mother and father answered questions related to attitudes surrounding their work, such as whether it is true or false that their shift/work schedule causes extra stress for them and child or whether their schedule is flexible enough to handle their family's needs.

Table 31: Subtopics in Employment in Year 5 by survey instrument

Subtopics	m	f	p	h	o	t
Employment Calendar				X		
Traditional work	X	X				
Non-traditional work	X	X				
Unemployment	X	X				
Work stress/flexibility	X	X				

13.1. Occupations

For **traditional employment**, we constructed an occupation variable for mothers (m4k12) and fathers (f4k12) based on the 3 digits codes from the U.S. Bureau of Labor Statistics (BLS) Occupational Classification System by Major Occupational Groups. These categories are summarized below:

101 – Professional, Technical, and Related Occupations (Group A)
102 – Executive, Administrative, and Managerial Occupations (Group B)
103 – Sales Occupations (Group C)
104 – Administrative Support Occupations, including Clerical (Group D)
105 – Precision Production, Craft, and Repair Occupations (Group E)
106 – Machine Operators, Assemblers, and Inspectors (Group F)
107 – Transportation and Material Moving Occupations (Group G)
108 – Handlers, Equipment Cleaners, Helpers, and Laborers (Group H)
109 – Service Occupations, except Private Household (Group K)
110 - Unspecified
112 - Military
113 – Farming/Agriculture (father baseline only)
114 – Self-employed (father baseline only)

13.2. Constructed Variables - Employment Calendar Variables

PCGs were administered an employment calendar, as part of the In-Home Activity Workbook, to record detailed data about their employment history. The Year 5 child care and employment calendar data file contains information for 2,013 respondents. A similar calendar was also administered for the PCGs child care schedule. Approximately 1,400 respondents completed both the child care and employment calendars at the Year 5 data collection. Please note, there are approximately 1,000 respondents who completed the In-Home activities or the PCG telephone survey at the Year 5 wave but do not have child care or employment calendar data for the corresponding follow-up.

For the Year 5 employment history calendar, the respondent was instructed to start by describing any paid jobs they've held for at least 2 weeks since either the focal child's third birthday (if they had participated in the prior wave's interview) or the focal child's birth (if they had not participated in the prior wave's interview).

The Year 3 and Year 5 files contain a similar set of calendar variables related to the respondent's employment history. The employment calendars collected information on the length of time the respondent spent in each job and the hours and shifts worked. Data users should refer to questions E2 through E14 in the 5-year In-Home Activity Workbook for the exact wording of the survey questions at each wave.

Please note that the employment history variables do not correspond precisely to the questions in the Employment History Calendar sections of the Year 5 In-Home Activity Workbook. For example:

- At each wave, the first question asked is whether the respondent "worked in a paid job for at least two weeks in a row." Those who responded "no" to this question will have a "0" in the variable for the total number of jobs and then no subsequent values in the variables which store substantive information about particular jobs. Those who responded "yes" to this question will have a value of "1" or greater for the total number of jobs. These respondents will have been asked for substantive information on each job based on how many times they continued to say that they had additional jobs at the end of the section.
- The Year 5 file does not contain the variable that was asked at each wave regarding the "ideal" number of total hours the respondent would like to work each week.

At each wave, the employment calendar collected a short set of basic descriptive variables including the date of the interview (ch4emp_month and ch4emp_year) and the total number of jobs the respondent has had (ch4emp_totjob). The employment calendars also collected descriptive information on up to 10 jobs that the respondent had had by the time of the interview. The employment calendar also contains supplemental information that denotes when significant changes in hours and/or work shifts for a particular job occurred, if applicable.

Table 32: Employment Calendar Variables

Constructed Variable	Variable Label	Description
ch4emp_year	Employment Calendar Interview Year	Year calendar administered
ch4emp_month	Employment Calendar Interview Month	Month calendar administered
ch4emp_[0-9]	Job [1-10]	What number of Jobs
ch4emp_totjob	Total number of jobs since child's birth	Total number of jobs since child's birth
ch4emp_leave_[0-9]	j[1-10]: job protected leave?	Leave for Job N
ch4emp_hrwk_[0-9]	j[1-10]: hours per week worked	Hours worked per week Job N
ch4emp_cs_[0-9]	j[1-10]: change in shift?	Change in shift for Job N
ch4emp_csday[1-5]_[0-9]	j[1-10]: [1-5] shift is day?	Type of shift change for Job N
ch4emp_cseve [1-5]_[0-9]	j[1-10]: [1-5] shift is evening?	Type of shift change for Job N
ch4emp_csnum_[0-9]	j[1-10]: number of changes in shift	Type of shift change for Job N
ch4emp_csrot[1-5]_[0-9]	j[1-10]: [1-5] shift change is night?	Type of shift change for Job N
ch4emp_csswi[1-5]_[0-9]	j[1-10]: [1-5] shift change is swing?	Type of shift change for Job N
ch4emp_shday_[0-9]	j[1-10]: shift is day?	Type of shift for Job N
ch4emp_sheve_[0-9]	j[1-10]: shift is evening?	Type of shift for Job N
ch4emp_shrot_[0-9]	j[1-10]: shift is night?	Type of shift for Job N
ch4emp_shswi_[0-9]	j[1-10]: shift is swing?	Type of shift for Job N
ch4emp_chhr[1-5]_[0-9]	j[1-10]: hr/wk of [1-5] hr/wk change	Hours worked per week for Job N after change
ch4emp_chnum_[0-9]	j[1-10]: number of changes in hr/wk	Number of hour changes for Job N
ch4emp_csq[1-5]_[0-9]	j[1-10]: qtr of [1-5] shift change	First day of 1st/2nd/3rd/4th quarter of year in which shift change occurred
ch4emp_chq[1-5]_[0-9]	j[1-10]: qtr of [1-5] hr/wk change	First day of 1st/2nd/3rd/4th quarter of year in which hour change occurred
ch4emp_startq_[0-9]	j[1-10]: q job [1-10] starts	First day of 1st/2nd/3rd/4th quarter of year in which job started
ch4emp_endq_[0-9]	j[1-10]: q job [1-10] ends	First day of 1st/2nd/3rd/4th quarter of year in which job ended

Note: 0 denotes 10th job; 1-5 is the shift or hour change within the job that is being referred to.

14. Childcare

At Year 5, both mother and father were asked about their childcare arrangements. PCGs were also administered a child care calendar as part of the In-Home Activities.

Table 33: Subtopics in Childcare in Year 5 by survey instrument

Subtopics	m	f	p	h	o	t
Childcare Calendar				X		
Childcare Services and Availability	X	X				

14.1. Constructed Variables - Child Care Calendar Variables

At the Year 5 wave of data collection, PCGs were administered a child care calendar as par to the In-Home Activities. The respondent was instructed to start by describing any child care arrangements the "focal" child has had since either the "focal" child's third birthday (if they had participated in the prior wave's interview) or the "focal" child's birth (if they had not participated in the prior wave's interview).

The Year 3 and Year 5 data contain a similar set of calendar variables related to the respondent's previous child care arrangements. The child care calendars collected information on type, hours, and duration of child care arrangements for the "focal" child. Data users should refer to questions E15 through E25 in the 5-year In-Home Activity Workbook for the exact wording of the survey questions at each wave.

Please note that the child care arrangement variables in these data do not correspond precisely to the questions in the Child Care Calendar sections of the Year 5 In-Home Activity Workbook. For example:

- At each wave, the first question asked is whether the "focal" child had ever been cared for on a regular basis by someone other than the respondent. Those who responded "no" to this question will have a "0" in the variable for the total number of child care arrangements and then no subsequent values in the variables which store substantive information about particular arrangements. Those who responded "yes" to this question will have a value of "1" or greater for the total number of arrangements. These respondents will have been asked for substantive information on each arrangement based on how many times they continued to say that they had additional arrangements at the end of the section.
- The Year 5 file does not contain variables that directly correspond to final two questions in the Child Care Calendar sections (F26/F27); these questions were created to lead interviewers through a script inviting the respondent to participate in the Kindergarten Survey.

At each wave, the child care calendar collected a short set of basic descriptive and identification variables, including the date of the interview (ch4cc_month and

ch4cc_year) and the total number of arrangements the respondent has had for the focal child (ch4cc_totarr).

The child care calendars also collected descriptive information on up to 10 child care arrangements that the respondent had had by the time of the interview. The child care calendars also contain supplemental information that denotes when significant changes in hours the focal child spends in a particular arrangement occurred, if applicable.

Table 34: Child Care Calendar Variables

Constructed Variable	**Variable Label**	**Description**
ch4cc_year	Child Care Interview Year	Year calendar administered
ch4cc_month	Child Care Interview Month	Month calendar administered
ch4cc_[0-9]	Arrangement [1-10]	Which arrangement
ch4cc_totarr	Total number of arrangements since child birth	Total number of arrangements since child birth
ch4cc_vouch_[0-9]	c[1-10]: voucher?	Did they receive a voucher for this arrangement
ch4cc_prov_[0-9]	c[1-10]: provider	Type of provider – additional documentation in instrument
ch4cc_provlo_[0-9]	c[1-10]: provider location	Location provider – additional documentation in instrument
ch4cc_cch_[0-9]	c[1-10]: change in hr/wk?	Indicates any significant change in Hours for arrangement N
ch4cc_cchhr[1-10]_[0-9]	c[1-10]: hr/wk of [1-5] hr/wk change	Hours "focal" child in Arrangement N per week after change
ch4cc_cchnum_[0-9]	c[1-10]: number of changes in hr/wk	Number of hour changes for arrangement N
ch4cc_cchq[1-10]_[0-9]	c[1-10]: qtr of [1-5] hr/wk change	First day of 1st/2nd/3rd/4th quarter of year in which HOUR change occurred
ch4cc_chrwk_[0-9]	c[1-10]: hours per week child is in arrangement	Hours worked per week "focal" child in arrangement N
ch4cc_cstrtq_[0-9]	c[1-10]: q arrangements [1-10] starts	First day of 1st/2nd/3rd/4th quarter of year in which arrangement started
ch4cc_cendq_[0-9]	c[1-10]: q arrangements [1-10] ends	First day of 1st/2nd/3rd/4th quarter of year in which arrangement ended

Note: 0 denotes 10th child care arrangement; 1-5 references to the significant hour change within the arrangements that is being referred to

15. Romantic Relationships

A number of questions were asked during the Year 5 mother and father surveys to understand the parent's romantic relationship with one another as well as, if applicable, new partners. Questions were asked regarding their relationship quality with their partner (i.e. communication, supportiveness, cooperation, intimate partner violence) and their relationship status (whether they are married, cohabiting, dating, no longer together) and to whom. Constructed variables regarding their relationship status were made by the CRCW staff.

Table 35: Subtopics in Romantic Relationships in Year 5 by survey instrument

Subtopics	m	f	p	h	o	t
Relationship Quality	X	X				
Relationship Status	X	X				

15.1. Constructed Variables - Mother's relationship with child's father

- **cm4relf** mother's reported romantic relationship with child's father at Year 5

In the Year 5 mother survey, the mother's relationship status with the child's father was recorded based on information reported by the mother. Mothers were asked about their relationship status with the baby's father (m4a4), and cohabitation status as reported in question m4a4a1.

Mothers were considered married to the focal child's father for cm4relf if m4a4 =1. For mothers who reported to be romantically involved (m4a4=2), m4a4a1 was tabulated to determine the cohabitation status. Mothers who were romantically involved and lived with their respective babies' fathers "all or most of the time" were considered to be romantically involved – cohabiting (cm4relf=2). Mothers who were romantically involved with the respective babies' fathers but lived with father only "some of the time" are coded as rom-some visit (cm4relf=3). Mothers who were romantically involved with the respective babies' fathers but lived with them only "rarely", "never" or "rarely/never" are coded as rom-no-visit (cm4relf=4). Mothers who didn't live with the respective babies' fathers due to separation, divorce or death are coded as "sep/div/wid" (cm4relf=5). The three additional categories in the cm4relf variable: "friends", "not in any kind of relationship" and "father unknown" are based on mothers' report in m4a4.

Table 36: Constructed variables about parents' romantic relationships

Constructed Variable	Description of Constructed Variable
cm4alvf	Mother age when started living with father (years)
cm4amrf	Mother age when married father (years)
cm4cohf	Mother living with (not married) child's father at Year 5
cf4cohm	Father living with (not married) child's mother at Year 5
c[m|f]4cohp	Mother/Father living with (not married) new partner at Year 5
cm4marf	Mother married to baby's father at Year 5
cf4marm	Father married to baby's mother at Year 5
c[m|f]4marp	Mother/Father married to new partner at Year 5
cm4relf	Mother relationship with father at Year 5

15.2. Concept – Couple Relationship Quality

These items assess the couple's relationship with respect to their commitment, satisfaction with the sexual relationship, and trust. It also questions parents on whether their relationship is in trouble and the frequency with which they discuss breaking up.

15.2.1. Variables

Mother questions: **m4d6a-m4d6i**
Father questions: **f4d6a-f4d6i**

Items D6a through D6f are coded on a 5-point scale (1=strongly disagree and 5=strongly agree). Items D6g through D6i are coded on a 3-point scale (1=often, 2=sometimes, 3=never).

15.2.1. Modifications

Questions D6a-d are slightly modified versions of four questions from the Stanley and Markman Commitment Inventory,[38] three of which were included in the Oklahoma Marriage Initiative Statewide Baseline Survey.[39]

Question D6e is a modification of a question from the National Survey of Families and Households (NSFH) that asked individuals if they were 1 'very unhappy' to 7 'very happy' with their sexual relationship.[40]

Three questions about whether the relationship might be in trouble and consideration of breaking up (D6g-i) are modifications of NSFH questions, which were originally developed by Booth, Johnson and Edwards as part of the Marital Instability Index.[41]

[38] Stanley, Scott M. and Howard J. Markman. (1992). Assessing Commitment in Personal Relationships. *Journal of Marriage and the Family* 54: 595-608.
[39] Johnson, Christine A. and Scott M. Stanley, editors. (2001). The Oklahoma Marriage Initiative Statewide Baseline Survey. Bureau for Social Research, Oklahoma State University.
[40] Sweet, James A. and Larry L. Bumpass. (1996). The National Survey of Families and Households - Waves 1 and 2: Data Description and Documentation. Center for Demography and Ecology, University of Wisconsin-Madison (http://www.ssc.wisc.edu/nsfh/home.htm).
41 Booth, Alan, David Johnson and John N. Edwards. (1983). Measuring Marital Instability. Journal of Marriage and the Family 45: 387-394.

16. Parenting

Questions were asked to the mother, father and PCG at Year 5 about the respondent's relationship to their child and parenting practices. Questions about child welfare services include questions asked of the PCG about contact with Child Protective Services and questions asked of the mother and father about the focal child's foster parents, if applicable. In the category of parent-child contact are questions related to the time parent spends with child and the extent of their communication and visitation, for those parents who do not live with their child. In the parenting abilities subtopic, are questions regarding parent's decision-making, co-parenting, stress and self-perception as a parent. Activities, routines and discipline-related questions are grouped within the parenting behavior category.

Table 37: Subtopics in Parenting in Year 5 by survey instrument

Subtopics	**m**	**f**	**p**	**h**	**o**	**t**
Child Welfare Services	X	X	X			
Parent-Child Contact	X	X	X			
Parenting Abilities	X	X	X			
Parenting Behavior	X	X	X	X	X	

16.1. Constructed Variables - PCG's relationship with child

ch4pcgrel identifies the primary caregiver's relationship with the child, in most cases the PCG is the child's biological mother but the PCG can also be the biological father, grandmother, other relative or non-relative. Table 38 shows the distribution of cp4pcgrel. The PCG is the biological mother in situations where she or she and the biological father had custody of the "focal child" for half or more of the time. If the biological mother did not have primary custody of the child, the PCG was the father, relative, or friend who had custody of the child half or more of the time.

Table 38: Distribution of PCG's Relationship with Child at Year 5

	Frequency
Biological mother	2892
Biological father	27
Maternal grandmother	19
Paternal grandmother	7
Other relative	10
Foster care	1

16.2. Scale – Maternal Description of Child (MDoc)

The Year 5 In-Home Study of the FFCWS measured PCGs' affect towards their young children using the Maternal Description of Child (MDoC).[42] Although several researchers have adapted the MDoC for use with young children to measure maternal affect in large non-U.S. samples and small U.S. samples, FFCWS was the first study to implement it in a large, ethnically diverse U.S. sample. [43,44,45]

16.2.1. Administration

Data were gathered during a five minute speech sample recorded by audiotape. The MDoC was administered in English and Spanish. Interviewers asked the primary caregiver the following questions:

- How is child similar to his/her siblings/closest age sibling/cousin?
- How is s/he different?
- Now I'd like to get a general picture of child. Can you tell me a little about him/her?
- Who is child more like, you or his/her other parent? Why?
- All children are easier to raise in some ways and harder in others. How would you like child to be different?
- How do you feel about child's behavior when you are around other people?
- How do you feel when you're away from child?

Probes were used when necessary to obtain approximately five minutes of conversation. Following Caspi et al., including:

- How would you describe his/her personality?
- I've only just met him/her. Can you tell me what s/he is really like?
- How does s/he compare to other children his/her age?

16.2.2. Coding

The coding scheme was adapted from Caspi and colleagues. Responses (n ≈ 1,900) were coded for positive affect, negative affect, and detachment. Individual words mothers used to describe her child (e.g., determined, creative, kind) and the mother's verbal skills were also coded. A research assistant at the National Center for Children and Families (Teachers College, Columbia University) served as the "gold standard" coder, and six graduate students were found to be reliable ($\kappa \geq .85$). The following

[42] Martin, A., Razza, R. A., & Brooks-Gunn, J. (2015). The Maternal Description of Child (MDoC): A new audiotaped measure of maternal affect. Infant and Child Development, 24(3), 228-239.

[43] Baker, B.L., Heller, T.L., & Henker, B. (2000). Expressed emotion, parenting stress, and adjustment in mothers of young children with behavior problems. Journal of Child Psychology and Psychiatry, 41, 907-915.

[44] Caspi, A., Moffitt, T. E., Morgan, J., Rutter, M., Taylor, A., Arseneault, L., Tully, L., Jacobs, C., Kim-Cohen, J., & Polo-Tomas, M. (2004). Maternal expressed emotion predicts children's antisocial behavior problems: Using monozygotic-twin differences to identify environmental effects on behavioral development. Developmental Psychology, 40, 149–161.

[45] Pasalich, D.S., Dadds, M.R., Hawes, D.J., & Brennan, J. (2011). Assessing relational schemas in parents of children with externalizing behavior disorders: Reliability and validity of the Family Affective Attitude Rating Scale. Psychiatry Research, 185, 438-443.

detailed descriptions of positive affect, negative affect, and detachment are adapted from the coding manual.[46] Positive feelings, negative feelings, and detachment are considered continuous variables.

Positive Feelings toward Child (ch4mdoc_posaff)

Positive feelings toward child (ch4mdoc_posaff) is a global scale measuring the level of positive emotions and thoughts the parent expresses in her/his descriptions of the child during the MDoC. This scale is based on the **content** of the parent's descriptions, measured as the **quantity** of positive statements and the **specificity** of her/his descriptions, as well as her/his **tone** of voice when discussing the child. Thus, scores on the overall valence of positive feelings toward child should represent a composite of *quantity, specificity* and *tone*.

In terms of *content*, positive statements about the child include verbal expressions of love, affection, delight, respect, pride and admiration. Feelings such as, "I love her," "he makes me happy," "he keeps me going," and "when she comes home, I'm so glad to see her," exemplify positivity when describing the child. Descriptions such as, "she's very intelligent," "he's loveable," "he's a good kid," and "he's very advanced," are positive attributes that also imply positive feelings. The *quantity* of positive statements were also considered when scoring the scale, that is, how many positive things the parent says about the child. *Specificity* relates to the level of detail the parent uses to describe the child. For example, a statement such as, "she's a good kid, everybody likes her," is less specific than, "She's a leader with her friends; everybody does what she wants when they play; when she grows up, everyone will come to her with their questions – she's just that type of person." Specificity is most often conveyed in stories or anecdotes about the child or additional comments that clarify the meaning of the parent's response. For a parent's description to be considered highly specific, the coder needed to feel like the parent knows their child well.

Tone was evaluated by assessing the parent's affect while describing the child. A positive tone is one that is upbeat, warm, affectionate or proud. Coders listened for cues of a positive affect, such as if the parent sounds like she is smiling when describing the child. Tones that are not positive are either negative or flat. For descriptions of these tones, see descriptions of Negative feelings toward child and Detachment from child. It is important not to confuse a parent's personality with their tone, as parents differ in their energy levels and dispositions.

Coding Scale:

1: Expresses 0-2 positive statements toward child *and* almost no positive tone

[46] Ryan, R. M., Martin, A., & Ontaneda, E. (2006). Fragile Families In Home Study, Maternal Description of Child coding scheme: Instructions. New York: National Center for Children and Families, Teachers College.

2: Expresses some (3-5) positive statements toward child *and* tone is mostly negative or flat; no specificity is present in statements

3: Expresses some to moderate (6+) positive statements toward child, the tone is either mixed *or* mostly positive, *and* some specificity is present in statements

4: Expresses moderate to many (10+) positive statements toward child, tone is mostly positive, *and* there is moderate specificity present in statements

5: Nearly every (or every) statement is a positive one, tone is consistently positive and there is much specificity present in statements

Negative feelings toward Child (ch4mdoc_negaff)

Negative feelings toward child (ch4mdoc_negaff) measures the level of negative emotions and thoughts the parent displays in her/his descriptions of the child during the Maternal Description of Child (MDOC). Like positive feelings, this scale is based on the **content** of the parent's descriptions, the **quantity** of negative statements, and her/his **tone** of voice when discussing the child. Thus, scores on the overall valence of negative feelings toward child should represent a composite of *content, quantity,* and *tone*.

A parent's statement is negative in *content* if it includes verbal expressions of dislike, shame, irritation, anger, and disappointment. Feelings such as, "He drives me crazy," "She embarrasses me," "He's a pest," and "When she comes home, I'm like go back!" suggest negativity when describing the child. Descriptions such as, "I wish he were more independent like his sister," "he's too clingy," "she's not the easiest kid in the world," "He can't understand simple instructions," and "he's a terror," are negative attributes that imply negative feelings. The overall *quantity* of negative statements were considered when scoring the scale. Coders determined if the overall depiction of the child is negative or positive. To receive a 4 or 5 on Negative Feelings, the parent's description is mostly negative.

Tone was evaluated by assessing the parent's affect while describing the child. A negative tone is one that is irritated, hostile, derisive or (cruelly) sarcastic. Sadness or worry when describing the child is also considered negative, although less so than irritation or hostility. Cues of a negative tone are inflections such as sighing, a raised voice, sarcastic laughing, or (hostile) shouting. Tone and content were sometimes considered together, for if the parent's statement could be positive or negative, her tone may indicate the overall valence of the description.

Note that a parent can be moderately positive *and* moderately negative - at moderate levels the scales are not mutually exclusive. A parent could also be high on one scale and moderate on the other. However, it is not possible for a parent to be highly positive and highly negative.

Coding Scale:

1: Expresses 0-2 negative statements toward child *and* no negative tones.

2: Expresses a few (2-3) negative statements toward child *and* a few negative tones.

3: Expresses a moderate (4-6) number of negative statements toward child *and* tone is mixed.

4: Expresses many negative statements toward child *and* tone is somewhat negative or expresses a moderate number of negative statements and tone is often negative; in both cases, the overall depiction of the child is more negative than positive.

5: Nearly every (or every) statement is negative one *and* tone is consistently negative; the child is presented as a problem.

Detachment from Child (ch4mdoc_detach)

This scale (ch4mdoc_detach) measures the parent's expressed interest in, familiarity with or intimacy with the child. Detachment is distinct from both positive and negative feelings toward the child in that it captures the absence of either strong positive or negative feelings toward the child. Like positive and negative feelings, however, detachment is scored based on both choice of words and tone.

Detachment from the child is indicated in statements that are vague, generic, superficial, terse, or contradictory. They suggest a lack of familiarity with the child. In this way, detached statements can be considered the opposite of specific ones. Detached statements include ones such as, "He's a regular kid," "She's okay I guess," "He's a boy like any other boy," "He has his good points and bad points," and "I don't know." Superficial statements can include physical descriptors like, "he moves his feet like his father," or general statements when asked to describe the child's personality, such as, "he loves his bike." A detached statement is also one that directly contradicts a previous statement without explanation or contextualization. For instance, a parent might describe the child as "a people person, real social," and then say she wished the child weren't "so shy." This kind of contradiction is different from a parent who explains that her child is shy in some situations and outgoing in others. A detached parent will not offer examples or stories to explain the child.

A detached tone is flat and without affect. It reflects the absence of any emotion about the child, positive or negative. To determine if a tone was flat, coders listened for blunted expressions, a monotone voice, and notable brevity. Note that a parent can be moderately positive and/or moderately negative about the child and also be moderately detached.

Coding Scale:

1: Does not express any statements or tone indicated detachment from child.*

2: Expresses 1-3 statements indicating detachment from child *and* some flatness in tone.

3: Expresses 4 or more statements indicating detachment from child *and* some flatness in tone.

*If a parent expresses 1-3 statements indicating detachment OR some flatness in tone, give a score of 1; to get a 2, parents must express detachment in both content and tone.

Table 39. MDoc Variables

Variable	***Description***
ch4mdoc_posaff	Positive affect, quantity and intensity of affection and pride
ch4mdoc_negaff	Negative affect, quantity and intensity of disappointment/dislike
ch4mdoc_detach	Detachment, flat affect and lack of interest in child
ch4mdoc_verbal	Amount and descriptiveness of PCG's speech
ch4mdoc_chlike	Which parent is child more like
ch4mdoc_totdes	Total number of descriptors
ch4mdoc_firstdes	First statement descriptor
ch4mdoc_des01-59	Descriptor variables

16.2.3. General Problems

Approximately 11% of cases are considered uncode-able due to administrative issues. ch4mdoc_anasm indicates whether a case had data of sufficient quality to be included in an analytic sample, and should usually be used by researchers working with the MDoC. Variables ch4mdoc_intflag* indicate a series of 6 potential issues, though being flagged with an issue doesn't necessarily exclude a case from the recommended analytic sample.

Table 40. Administrative Flags

Variable	***Description***
ch4mdoc_uncode	Reason case was excluded from analytic sample.
ch4mdoc_firstdes_m	Reasons for missing first statement descriptor
ch4mdoc_intflag01	The parent spoke softly, making her responses difficult to hear.
ch4mdoc_intflag02	The parent didn't seem to understand the questions, making her responses difficult to characterize.
ch4mdoc_intflag03	The interviewer was overly suggestive, meaning that his/her questions/responses may have lead the parent to respond more positively or negatively that she would have without the interviewer's interference.
ch4mdoc_intflag04	The interviewer did not probe sufficiently, meaning the interviewer missed many opportunities to follow up on brief, unclear, and/or potentially revealing responses by the parent to the point where we cannot be sure of the parent's intended feelings.
ch4mdoc_intflag05	Others who were present interfered, meaning other adults or children are in the room and interfere to the point that their responses dominate the sample, especially if the main respondent is merely agreeing or disagreeing with what the other adult is saying about the child without offering their own ideas.
ch4mdoc_intflag06	Other problems

Table 41. Additional Variables describing Administration

Variable	***Description***
ch4mdoc_anasm	Analytic Sample
ch4mdoc_flag	Administered to Primary Caregiver (PCG)
ch4mdoc_span	Administered in Spanish
ch4mdoc_mdocdc	Data Collector ID

16.3. Scale – Aggravation in Parenting

The Aggravation in Parenting questions in the Year 5 Core Survey are derived from the Child Development Supplement (CDS) of the Panel Study of Income Dynamics (PSID).[47] The scale measures the amount of parenting stress brought on by changes in employment, income or other factors in the parent's life. It was developed for the Job Opportunities and Basic Skills Training Program (JOBS)[48] child outcome survey by Child Trends, Inc. and several items come from the Parent Stress Inventory.[49] Items Q1B11a-e are from the primary caregiver/child questionnaire in the PSID-CDS, and Q2A29a-d are from the primary caregiver/household questionnaire. The items used in the JOBS study are marked with an asterisk in the table below. Their 5-question scale had an alpha of 0.69. Research has shown that high levels of aggravation in parenting are related to mothers' employment status and to child behavior problems.[50]

16.3.1. Variables

Mother questions: **m4b6a- m4b6d** (4 variables, resident mothers), **m4b31a-m4b31d** (4 variables, non-resident mothers)
Father questions: **f4b6a-f4b6d** (4 variables, resident fathers), **f4b31a-f4b31d** (4 variables, non-resident fathers) (8 variables)

16.3.2. Modifications

The Year 5 study does not use all 9 of the items mentioned above. Instead, the four questions (asked to resident and non-resident parents separately) from Q2A29a-d are used (see table below for complete listings). The Year 5 questions are also scored on a 4-point scale, where 1 = "strongly agree," 2 = "somewhat agree," 3 = "somewhat disagree," and 4 = "strongly disagree," whereas the original questions used a 5-point Likert scale that ranged from "not at all true" to "completely true."

16.3.3. Scoring Information

Given that FFCWS did not implement the full scale, we suggest summing the variables and dividing by the top value of the Likert-scale.

---

[47] *Primary Caregiver of Target Child Household Questionnaire for the Child Development Supplement to the Family Economics Study, 1997*. (1997). Retrieved March 27, 2003, from ftp://ftp.isr.umich.edu/pub/src/psid/questionnaires/97child/PCGhhld.pdf
[48] Now known as the National Evaluation of Welfare-to-Work Strategies (NEWWS).
49 Abidin, R. (1995). Parent Stress Inventory, 3rd Edition. Odessa, FL: Psychological Assessment Resources.
[50] Hofferth, S., Davis-Kean, P.E., Davis, J., & Finkelstein, J. *The Child Development Supplement to the Panel Study of Income Dynamics: 1997 User Guide.* Survey Research Center, The University of Michigan Institute for Social Research.

Table 42: Aggravation in Parenting Variables

PSID-CDS	Year 5 Variables	Source Items
Q1A29a*	m4b6a, m4b31a f4b6a, f4b31a	Being a parent is harder than I thought it would be.
Q1A29b*	m4b6b, m4b31b f4b6b, f4b31b	I feel trapped by my responsibilities as a parent.
Q1A29c*	m4b6c, m4b31c f4b6c, f4b31c	I find that taking care of my child(ren) is much more work than pleasure.
Q1A29d*	m4b6d, m4b31d f4b6d, f4b31d	I often feel tired, worn out, or exhausted from raising a family

16.4. Scale – Conflict Tactics

Section G of the PCG Survey contains 14 items from the Parent-Child Conflict Tactics Scales (CTSPC). The original Conflict Tactics Scale (1979) was designed for use with partners in a marital, cohabiting, or dating relationship. The CTSPC was created in 1995 in response to limitations of the original scale as a measure of child maltreatment.[51]

16.4.1. Variables

In-Home Variables: **p4g1-p4g19** (19 variables)

16.4.2. Modifications

Our survey eliminates eight questions from the CTSPC that ask about severe physical maltreatment. However, we include the CTSPC's supplemental scale on Neglect (p4g15-19; 5 questions). The 19 resulting questions from our survey are listed in Table 43 below under relevant subsections with prevalence and chronicity statistics from the pioneer Gallup survey conducted in 1995.

[51] 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(4), 249 – 270.

Table 43: Conflict Tactics Scales Variables

Variable Name; *S*cale; Item	Year	Ever	Chronicity*
Nonviolent Discipline	***97.7***	***99.9***	***46.0***
p4g1. Explained why something was wrong	94.3	94.5	18.3
p4g5. Gave him/her something else to do instead of what he/she was doing	77.0	83.1	12.2
p4g12. Took away privileges from him/her	76.0	78.5	10.8
p4g2. Put in "time out" (or sent to room)	75.5	81.3	13.0
Psychological Aggression	**85.6**	**89.9**	**21.7**
p4g6. Shouted, yelled, or screamed at	84.7	86.7	12.8
p4g10. Threatened to spank or hit but didn't actually do it	53.6	61.8	10.6
p4g8. Swore or cursed at	24.3	26.0	6.5
p4g14. Called him/her dumb or lazy or some other name like that	16.3	17.5	5.7
p4g9. Said they would send him/her away or would kick him/her out of the house	6.0	7.0	3.9
Physical Assault	**n/a**	**n/a**	**n/a**
p4g7. Spanked him/her on the bottom with their bare hand	46.9	63.6	7.5
p4g4. Hit him/her on the bottom with something like a belt, hairbrush, a stick or some other hard object	20.7	29.4	5.5
p4g11. Slapped him/her on the hand, arm, or leg	36.9	51.2	7.3
p4g13. Pinched him/her	4.3	5.9	6.4
p4g3. Shook him/her	9.0	15.0	2.8
Neglect	**27.0**	**30.6**	**6.9**
p4g15. Had to leave their child home alone, even when they thought some adult should be with him/her	19.5	21.3	6.0
p4g16. Was so caught up with their own problems that they were not able to show or tell their child that they loved him/her	.2	1.1	4.6
p4g17. Was not able to make sure their child got the food he/she needed	11.0	13.7	5.5
p4g18. Was not able to make sure their child got to a doctor or hospital when he/she needed it	.4	1.2	2.0
p4g19. Was so drunk or high that they had a problem taking care of their child	2.3	3.3	5.9
***** prevalence and chronicity statistics from the pioneer Gallup survey (1995), NOT based on FFCWS data			

16.4.3. Scoring Information

For each question, subjects were asked to choose one of eight responses to the question "How many times have you done this in the past year?" The possible responses were:

a) once, b) twice, c) 3-5 times, d) 6-10 times, e) 11-20 times, f) more than 20 times, g) not in the past year, but it happened before, or h) this has never happened.

As seen above, the CTSPC can be used to estimate both *prevalence* and *chronicity*. - For research use, Prevalence (the percent who engaged in one more of the acts in the

scale or subscale) is the most frequently used score. For some research purposes, a Chronicity score is also important[52].

Prevalence is often expressed using a dichotomous variable indicating whether an event: a) has happened one or more times, or b) has never happened (alternately, "has happened one or more times in the past year" or "has not happened in the past year").

Chronicity may be measured in several ways:

1. Give responses a value between 0 and 6 and sum the total for each subsection (we will need to pay attention to "not in the past year," currently coded as '07', so that it does not receive greater weight than other responses).

2. Assign weights to values in accordance with the frequencies indicated by the response categories. This is done by adding the midpoints for the response categories chosen by the participant. The midpoints are the same as the response category numbers for categories 0, 1, and 2. For category 3 (3 – 5 times) the midpoint is 4, for category 4 (6 – 10 times) it is 8, for category 5 (11 – 20 times) it is 15, and for category 6 (More than 20 times in the past year) using 25 is suggested as the midpoint.[53]

3. Convert raw scores to percentages using 0-100 standardized scales. This is done by simply dividing the score for each respondent by the maximum possible score, multiplying by 100, and rounding to an integer. Thus, for the Reasoning scale, a respondent with a raw score (by method 1) of 9 would have a percentage score of 50, and a respondent with a raw score of 12 would have a percentage score of 67. The advantage of the percentage standardization is that it expresses all scales in the same units and uses units that have meaning to the general public: i.e., percentage of the maximum possible score. However, there is no statistical advantage[54].

4. Use the Gallup data on the preceding page as a benchmark for new data.

Categorical measures for CTSPC responses are employed chiefly for assault data, and utilize questions not administered in the FFCWS. Straus suggests that it may be useful to set threshold criteria for "low" and "high" rates of incidence for the various subscales,[55] though there are currently no established norms for such categories.

Summing responses for the entire scale or constructing categories would be problematic since for several items high frequencies may represent socially desirable

[52] Straus, M.A. (2001). Scoring and norms for the CTS2 and CTSPC Family Research Laboratory, University of New Hampshire. http://pubpages.unh.edu/~mas2
[53] 25 is an assumed mid-point for the "more than 20 times" category. See Murray A. Straus' "Scoring and Norms for the CTS2 and CTSPC" at Straus, M.A., Hamby, S.L., Warren, W.L. (2003). The Conflict Scales Handbook, Western Psychological Services.
[54] Straus, M.A. (1990). Measuring intrafamily conflict and violence: The conflict Tactics (CT) Scales. In M.A. Straus & R.J. Gelles (Eds.), Physical violence in American families, New Brunswick, NJ: Transaction.
[55] Also see Straus section on "Cutting Points For … Scales"

conflict management tactics. Even for undesirable tactics, there is a lack of agreement over how to measure the severity of physical and psychological maltreatment. With applicable standards, however, measures combining severity and chronicity would be possible.[56]

[56] Such measures are available for assault data. For one such measure, see the Frequency Times Severity Weighted (FS) Scale in Kantor, G.K. and Jasinski, J.L. Out of the Darkness, pp. 123-124.

17. Legal System

At Year 5, both mother and father were asked about any involvement they had had with the criminal justice system and if so, when did the incident occur, whether they were charged with a crime and if so, what were they charged for, as well as if and how long did they spend time in jail or in prison. Questions were also asked regarding their history with the criminal justice system, including if they were ever sent to a youth correctional facility. Police contact questions included whether the respondent was stopped by police but not arrested, and whether the respondent reported an incident of IPV to the police. Other legal questions in the data are related to legal paternity the father has over the child and which parent has legal custody.

Table 44: Subtopics in Legal System in Year 5 by survey instrument

Subtopics	m	f	p	h	o	t
Criminal Justice Involvement	X	X	X			
Legal Custody	X	X				
Paternity	X	X				
Police Contact and Attitudes	X	X				

17.1. Constructed Variables - Father in Jail

cm4finjail, cf4finjail, cm4ffinjail, cm4fevjail, cf4fevjail, cm4ffevjail

The constructed jail variables for mother report of father in jail, father report of his own incarceration, combined reports, and cumulative measures of whether father has ever been in jail are available at each wave. The constructed jail variables maximize reports of fathers' incarceration status based on information in the core files and from disposition reports. The variables are coded as 0 for not in jail/never in jail and 1 for in jail/ever in jail. We did not code cases "not in wave" on these variables; instead, missing values represent no information available on jail status.

18. Housing and Neighborhood

At Year 5, mother, father and PCG were asked questions regarding their and their child's living arrangements. For household composition, a housing roster was used to plot the number of people in the home, what relationship the respondent had to each person, how old each person is and whether they were working. In addition, respondents were asked what their current housing situation was like (housing status) and whether they'd moved since the child's first birthday or been evicted in the last year (residential mobility). If they had been evicted, respondents were asked where they stayed and were asked how much they owed on the house they were evicted from. To ascertain their home environment, respondents were asked about their housing utilities (heating, electricity and gas) and if their utilities were ever shut off in the last. In the In-Home Study, the interviewer noted a variety of observations about the home environment, such as if the home had a television, toys, or highchair, which floor the home was on, whether there was an operational elevator, etc. Regarding the neighborhood conditions, the mother and father were asked about the kind of neighborhood they lived in (whether there was graffiti, whether it was safe, whether there was gang activity, times they witnessed a shooting in the last year, etc.), and the interviewer remarked on neighborhood conditions as well. The Kindergarten teacher also commented on the neighborhood conditions of the school the child attended.

Table 45: Subtopics in Housing and Neighborhood in Year 5 by survey instrument

Subtopics	**m**	**f**	**p**	**h**	**o**	**t**
Child Living Arrangements	X	X	X			
Home Environment	X	X	X		X	
Household Composition	X	X	X			
Housing Status	X	X			X	
Residential Mobility	X	X				
Neighborhood Conditions	X	X	X			X

Table 46: Constructed variables for household composition

Constructed Variable	Description of Constructed Variable
c[m|f]4adult	Number of adults 18 or over in household
c[m|f]4kids	Number of children under 18 in household
cm4cohf	Mother living with (not married) child's father at Year 5
cf4cohm	Father living with (not married) child's mother at Year 5
c[m|f]4cohp	Mother/father living with (not married) new partner at Year 5
c[m|f]4gdad	Grandfather present in household
c[m|f]4gmom	Grandmother present in household

18.1. Scale – Home Observation for Measurement of the Environment (HOME)

The HOME scale provides means to examine and assess the caring environment in which the child has been reared. The Year 5 In-Home Study includes items from both the Early-Childhood HOME (ECHOME) Inventory for children aged 3-6 and old age HOME scales. The two groups of HOME subscales, Observational scale and Parental Report scale, can be constructed using responses to relevant questions in our survey. Table 41 and 48 present question items in the Year 5 In-Home Interviewer Observations and PCG Survey which can be used to construct nine HOME subscales and the relevant statistics of the items in these subscales. Computations below were patterned after the scales derived for PHDCN survey in paper by Leventhal et al.[57]

Table 47: HOME Observational Scales

Subscale*	Variable
Parental Warmth	
Parent talks with child twice during visit	o4t1
Parent answers child's questions orally	o4t2
Parent encourages child to contribute	o4t3
Parent mentions skill of child	o4t4
Parent praises child twice during visit	o4t5
Parent uses diminutive for child's name	o4t6
Parent voices positive feelings to child	o4t7
Parent caresses, kisses, or hugs child	o4t8
Parental Lack of Hostility[c]	
Parent does not shout at child during visit	o4t9
Parent does not express annoyance with child	o4t11
Parent does not slap or spank child	o4t12
Parental Verbal Skills	
Parent's speech is distinct, clear, audible	o4t14
Parent initiates verbal interchanges	o4t15
Parent expresses ideas freely and easily	o4t16
Parent appears to understand questions	o4t17
Home Interior Environment[c]	
No broken window/cracked window panes?	o4r1
Wiring in the house are concealed	o4r2
Housing unit does not contain open cracks or holes in walls or ceiling?	o4r3
Housing unit does not contain holes in floor?	o4r4
Housing unit does not contain broken plaster/peeling paint over 1 sq foot?	o4r5
Inside of home not dark?	o4r6
Is inside of home crowded?	o4r7
All visible rooms of house/apartment not noticeably cluttered?	o4r8
All visible rooms of the house/apartment not dirty	o4r9
Home free of any potential hazards	o4r10
House not overly noisy from noise in the house	o4r12

[57] Lenventhal, T., Selner-O'Hagan, M.B., Brooks-Gunn J., Binenheimer, J.B., Earls, F. (2004). The Homelife Interview from the Project on Human Development in Chicago Neighborhoods: Assessment of Parenting and Home Environment for 3- to 16 Year-Olds. Parenting: Science and Practice 4(2&3), 211-241.

Subscale*	Variable
Condition of Surrounding Block[c]	
Garbage, litter, broken glasses on street	o4p1
General condition of most buildings on block	o4p2
Graffiti on the buildings/walls on block/within 100 yards	o4p3
Vacant or abandoned building on block	o4p4
Home Exterior Environment[c]	
Environment immediately outside home does not have unlit entrance or stairway	o4p6a
Environment outside home does not have broken steps?	o4p6b
Environment outside home does not have broken glass or broken toys	o4p6c
Environment outside home does not have large ditches?	o4p6d
Environment outside home does not have alcohol/drug paraphernalia?	o4p6e
Environment outside home does not have strewn garbage/litter	o4p6f
Exterior of building does not have peeling paint/need paint job?	o4p7a
Exterior of building does not have crumbling or damaged walls?	o4p7b

Table 48: HOME Parental Report Scales

Subscale*	Variable
Developmental Stimulation[a]	
Access to toy or real musical instrument	p4c2
Access to toys to learn colors	p4c1a
Access to toys to learn sizes	p4c1b
Access to toys to learn shapes	p4c1c
Access to toys to learn numbers	p4c1e
Access to toys to learn animal names/behaviors	p4c1d
Access to toys to learn spatial relations	p4c1f
Access to at least 3 puzzles	p4c3 & p4c4
Access to toys to learn patterned speech (assuming this is "nursery rhymes or songs")	p4c1g
Access to toys permitting free expression (assuming this is "anything to make/draw things")	p4c5
Access to Reading[a b]	
Parent/family member reads to child 3x/wk	p4c7
Child has access to toys to learn alphabet	p4c1h
Child has access to 10 books	p4c9 & p4c10
Child has 3 or more books of own	p4c11& p4c12
Outings/Activities[a]	
Parent engages in outdoor recreational activities with child every other week	p4c16a
Child goes on outings every other week	p4c16b
Child has gone to museum past year	p4c17a
Child has taken trip >50 miles from home in the past year	p4c17c
Child was included in family's hobby	p4c16c
Child has taken trip on plane, train, bus in the past year	p4c17b

18.2. Concept – Exposure to Violence

The variables in this section p4h1-p4h7 were adapted from the "My Exposure To Violence" Interviews.[58,59] Because we utilize only 7 items from this instrument, and because these items have been adapted from the originals, we offer no standardized methods for coding or analysis.

[58] Buka, S., Selner-O'Hagan, M., Kindlon, D., & Earls, F. (1996). My exposure to violence and my child's exposure to violence. *Unpublished manual*.

[59] Selner-O'Hagan, M. B., D.J. Kindlon, S.L. Buka, S.W. Raudenbush and F.J. Earls (1998). "Assessing Exposure to Violence in Urban Youth." Journal of Child Psychology and Psychiatry and Allied Disciplines, 39, pp. 215-224.

18.3. Scale – Neighborhood Collective Efficacy

The Year 5 Core Surveys includes two sets of items that together measure neighborhood collective efficacy. The first set is related to informal social control and the second measures the level of cohesion and trust.

Items I0M1- I0M5 of this Section were reconstructed from the Informal Social Control Scale and items I0N1-I0N5 from the Social Cohesion and Trust Scale.[60,61] We are unable to offer a standardized method for scoring/analyzing these variables, as the measures have been altered from the original instruments.

18.3.1. Variables

Mother Survey: **m4i0m1- m4i0m5; m4i0n1- m4i0n5**
Father Survey: **f4i0m1- f4i0m5; f4i0n1- f4i0n5**

[60] Sampson, R. J. (1997). "Collective Regulation of Adolescent Misbehavior: Validation Results from Eighty Chicago Neighborhoods." Journal of Adolescent Research, 12(2), 227-244.
[61] Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy. *Science*, 211(5328): 918-924

19. Education

At Year 5, both mothers and fathers were asked about their own educational attainment including any schooling they had attended or completed since the last interview. Mothers and fathers were also asked about their current partner's educational attainment and if the child was currently in kindergarten, pre-kindergarten, daycare, or nursery school. Kindergarten teachers were asked about the child's achievement in several subject areas and whether the child was promoted to first grade. For parent school involvement, each parent was asked if they had talked to the child's care provider about how the child was doing in the past year, whether they attended a variety of events and the child's school, and questions about meeting friends through the child's school or daycare. Teachers were asked if the parents attended any informal meetings or if they communicated with the parents as well as the purpose of the communication. Parents were asked about school characteristics such as location, existence of a parent group at the school, and how often that group has meetings. Teachers provided many aspects of school characteristics including grade levels in the school, type of school, time of child's class, neighborhood characteristics of the school, and more. Teachers also provided information on school composition (ex. enrollment, ethnicity), student experiences (ex. classroom behavior, class activities), and teacher characteristics (ex. aides in the classroom, teacher educational attainment, teaching stress).

Table 49: Subtopics in Education in Year 5 by survey instrument

Subtopics	**m**	**f**	**p**	**h**	**o**	**t**
Educational Attainment/Achievement	X	X				X
Parent School Involvement	X	X				X
School Characteristics	X	X				X
School Composition						X
Student Experiences						X
Teacher Characteristics						X

19.1. Constructed Variables - Parent's Education

- **cm4edu, cf4edu** mothers' and fathers' education at Year 5

In constructing these variables, parents' report of new education, training and schooling since the previous wave was used. Parents' reports from previous waves were used as needed when parents did not report attaining any new, additional education at the time of the interview. Mothers' reports of fathers' education were also used when fathers' reports were missing and mothers' were available.

20. Other Topics in Year 5

The following table includes subtopics within topics that are not explicitly written about in this user guide. For more on these topics, please refer to the survey instruments/questionnaires and the FFCWS metadata website.

Table 50: Other topics and subtopics in Year 5 by survey instrument

Topics and Subtopics	m	f	p	h	o	t
Attitudes and Expectations						
Attitudes/Expectations/Happiness	X	X	X			X
Demographics						
Age	X	X		X		X
Citizenship and Nativity	X	X				
Language	X	X			X	X
Mortality	X	X				
Race/Ethnicity	X	X				X
Sex/Gender	X	X				X
Family and Social Ties						
Grandparents	X	X				
Parent's Family background	X	X				
Social Support	X	X				
Community Participation	X	X				
Religion	X	X				

Appendix: Additional Information on the Year 5 In-Home Survey

0. Study Background and Administration

The In-Home Study was funded by a grant from the National Institutes of Health. The research was a collaborative work of the researchers at the Center for Health and Wellbeing (CRCW) of Princeton University and Teachers College of Columbia University. Data collection was administered by Mathematica Policy Research, Inc. (MPR) in Princeton, NJ.

0.1. Research Team

The PIs of the In-Home Study included Christina Paxson, Jane Waldfogel, Neal B. Guterman, and Jeanne Brooks-Gunn.

0.2. Components of the Study

The In-Home Study consisted of three major components at Year 5: (1) the Primary Caregiver (PCG) Survey, (2) the Activity Workbook, and (3) Interviewer Observations.

The PCG Survey questionnaire covers child's health status and some details about the most-recent accidents which occurred to the child, family routines, home toys and activity items, nutrition, family's expenditure on foods, housing characteristics, parental stress, parental mastery, child discipline, nutrition and food expenditure, exposure to violence, Child Protection Services (CPS) contact, child's behavior problems, housing common areas, interior of house, child's appearance, family's food expenditures, home scales, and child's emotion and cooperation. Variables derived from the Year 5 PCG survey begin with the prefix "p4".

The remaining questions in the In-Home survey were designed for the interviewers to fill in their observations about the home environment, child's appearance, and parent-child interaction. We call this section of the survey the **Interviewer Observations**. Variables derived from the Year 5 Interviewer Observations begin with the prefix "o4".

The Activity Workbook was designed to record the height and weight measurements of both child and mother or caretaker; responses to the Peabody Picture Vocabulary Test (PPVT) and the Woodcock-Johnson Letter-Word Recognition test. In addition, the workbook also includes an introduction script to request for permission to obtain the contact information of the teacher of the children, who had been enrolling in kindergarten, for a teacher interview, a separate component of the CCPE. Variables derived from the Year 5 Activity Workbook begin with the prefix "h4".

0.3. Conducting the In-Home Survey

The Year 5 In-Home Study was conducted mostly in 2004 in the two pilot cities; and in 2005-2006 in the remaining eighteen cities.

Slightly over 91 percent of the respondents of the Year 5 Core mother survey were contacted and invited to participate in the In-Home survey. Among people contacted, about eighty one (81) percent completed the Year 5 In-Home Study. About seventy-

eight (78) percent of the Year 5 In-Home respondents completed all components of the survey. Most of the remaining participants completed only the PCG interview over the telephone either because the parent or the care giver refused participation in the In-Home Study or such visit could not be conducted because the family had moved away from the last located residence without leaving any new contact information. A very small fraction of the respondents completed only a part of the Activity Workbook.

Respondents of the Fragile Families Baseline survey were located and screened for eligibility for inclusion in the succeeding waves of the core survey and collaborative studies of the core survey.

The survey administration process for both the Core and In-Home Studies is illustrated in the flowchart in Figure 1.1. The process of administering the Year 5 In-Home surveys is presented in the flowchart in Figure 1.2.a., 1.2.b, and 1.2.c. These charts show the initial process of administering the Year 5 In-Home Study in the two pilot cities and the revised process implemented in the remaining eighteen cities as follows:

- Version 1.2.a was used for the first wave survey in the two pilot cities with In-Home Survey completed in home.
- Version 1.2.b was used for the second wave survey, In-Home Survey completed in home.
- Version 1.2.c was used for the third wave survey, In-Home Survey completed over the telephone.

Figure 1.1 Process of Administering the Fragile Families Core Study and the In-Home Study

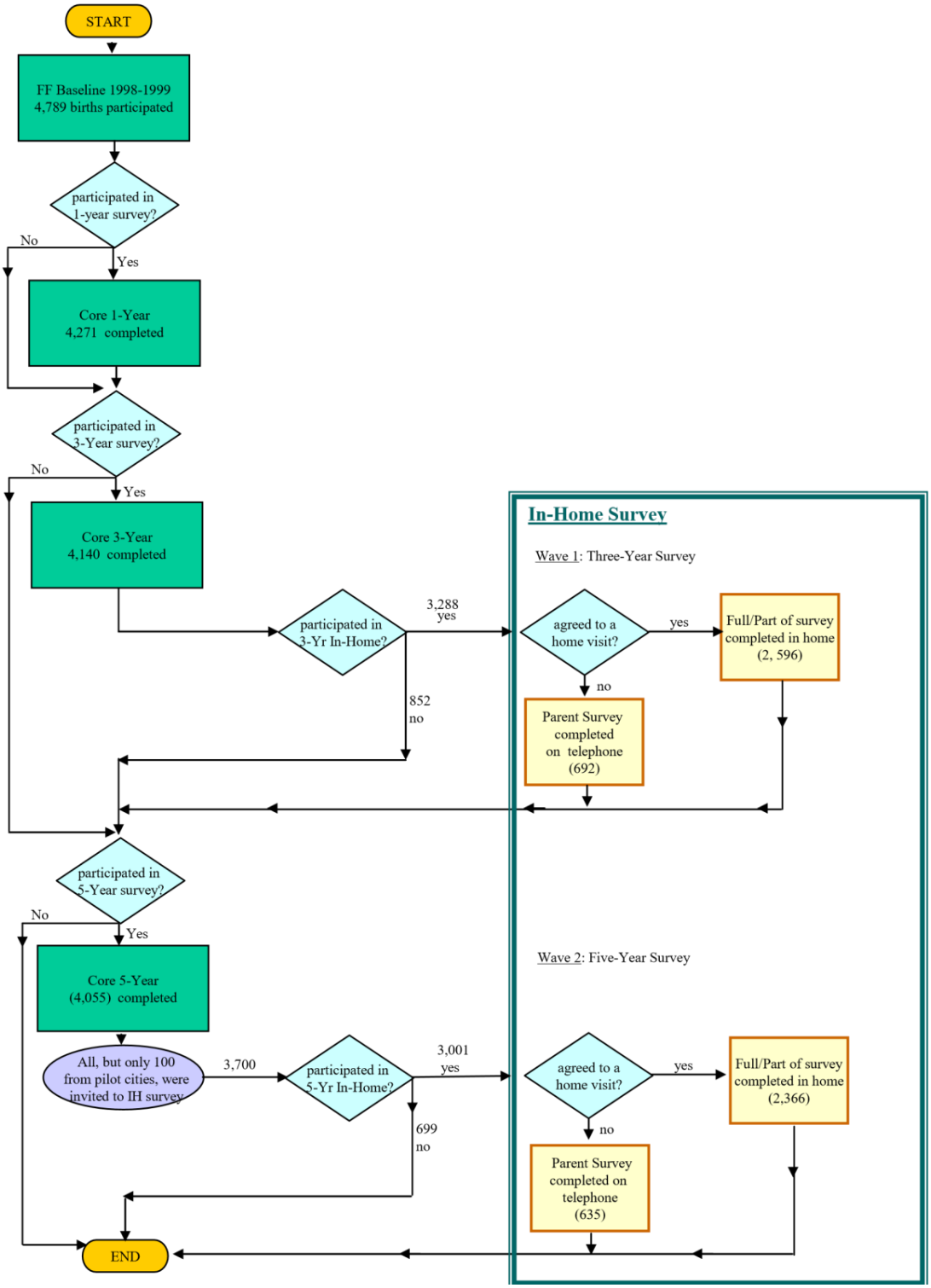


Figure 1.2.a Conducting Year 5 In-Home Survey in Pilot Cities

Core Study completed on telephone or contact made in field. In-Home Study completed in home.

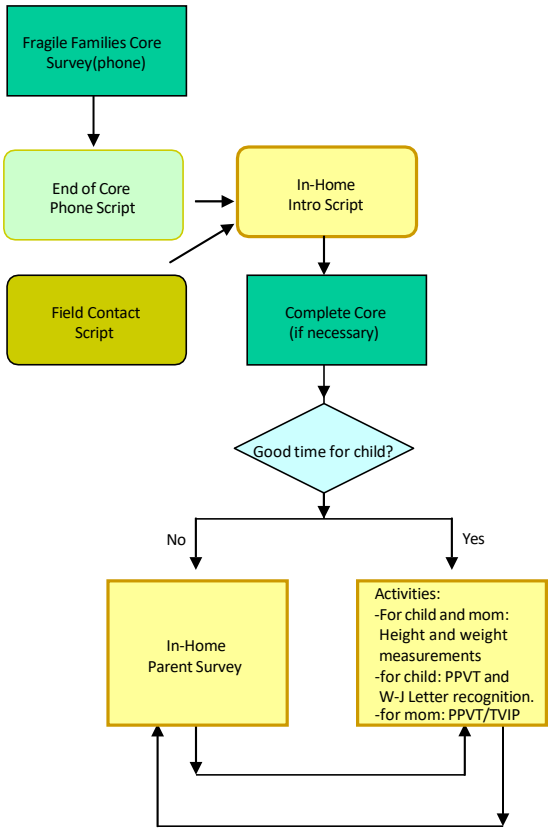


Figure 1.2.b. Conducting Year 5 In-Home Study in 18 cities

Core Study completed on telephone or contact made in field. In-Home Study completed in home.

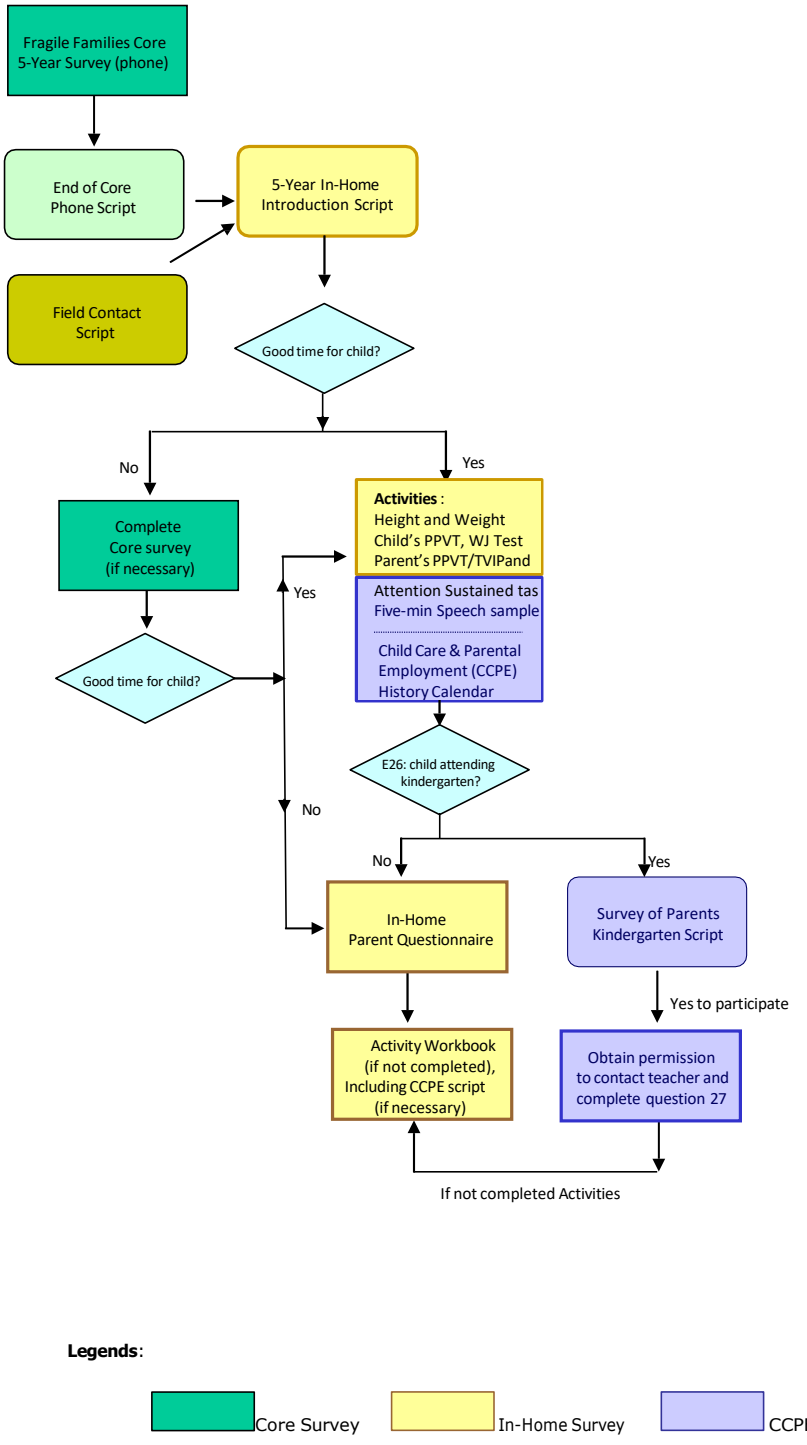
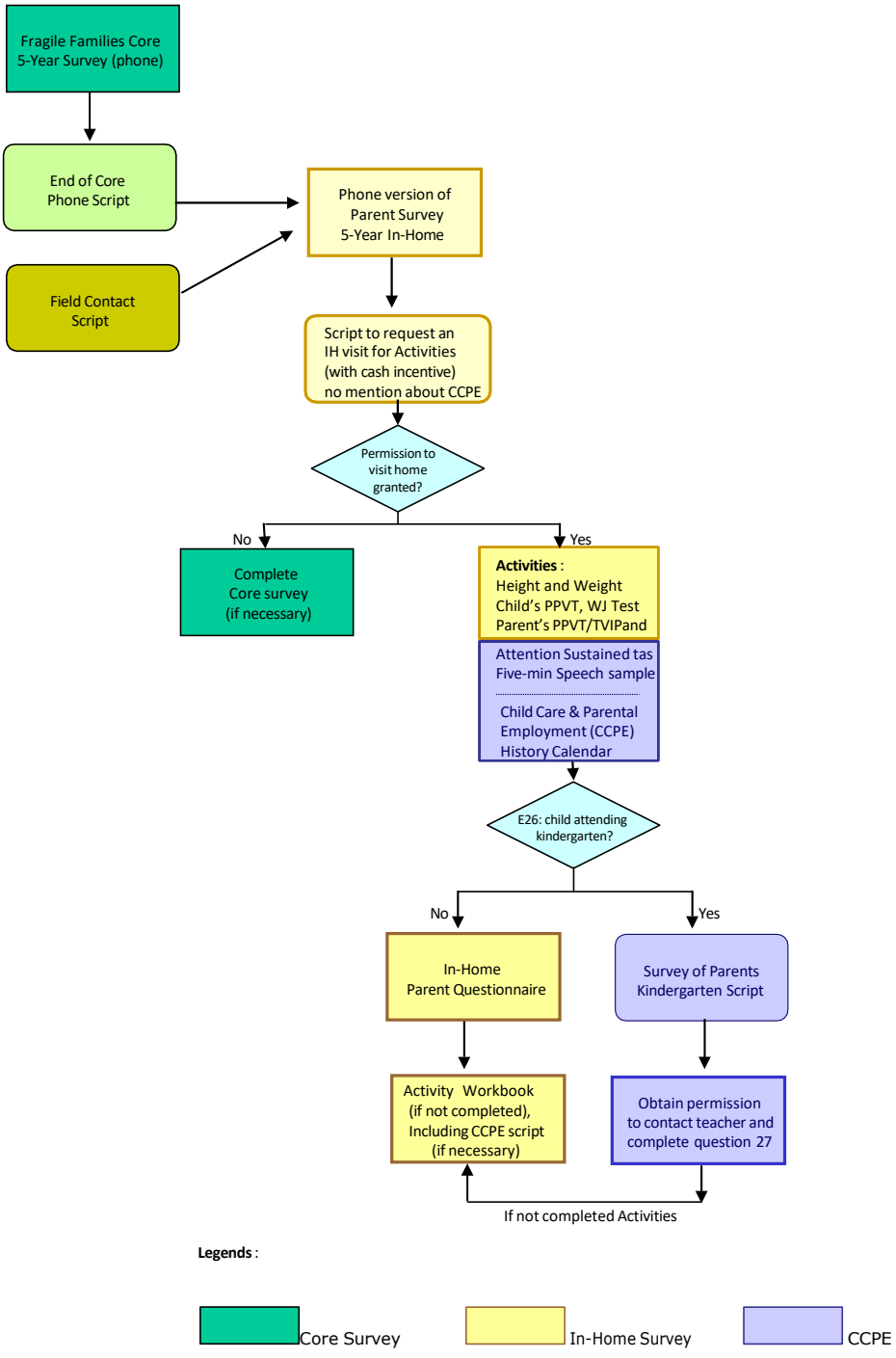


Figure 1.2.c. Conducting Year 5 In-Home Study in 18 cities

Core Study completed on telephone or contact made in field. In-Home Study completed over the telephone.



1. Questionnaire Changes between Pilot Survey and the Revised Survey

In 2004[62] the first wave of data collection of the Year 5 In-home Study was conducted for two pilot cities. Data collection in this period was closely monitored and the data gathered was analyzed and evaluated in order to design strategies to improve data collection in the remaining cities including identification of necessary modifications to the contents and structure of the questions to improve the usefulness and quality of data collected.

Interviews in the 18 non-pilot cities were conducted in 2005-2006. Modification of the survey instruments for these cities was assessed as not necessary, with a few exceptions.

1.1. Minor change to response option

A minor change was made to a "No" response, pre-coded as "2", for a few questions with "Yes" or "No" response in the pilot instrument to "0" for similar responses in the remaining 18 cities. This change made the negative response code of the affected variables consistent with the code used in other variables. Recodes of data values of the affected variables were done for data of the pilot cities when we cleaned data for release.

1.2. Integration of Child Care and Parental Employment (CCPE) questionnaire

To facilitate data collection for another collaborative study, the Child Care and Parental Employment (CCPE) questionnaire was integrated to the In-Home Activity Workbook (version used for 18 cities).

Components of the survey for the CCPE included in the Activity Workbook of the Year 5 In-Home survey include: the PCG's Employment History Calendar (variable name prefix: ch4emp); Child Care Calendar information (ch4cc), Leiter-R Attention Sustained Task(ch4lr), Five-Minute Speech sample (ch4mdoc), and a request to obtain contact information of the kindergarten teacher of the child.

1.3. Activity Workbook timing

When the In-Home Study was conducted in the remaining 18 cities, the interviewer could conduct the Activity Workbook with the respondent and child in one of the following three orders:

a) immediately after the "Neglect Introduction Script" (first thing),
b) following completion of the core, or
c) at the end of the PCG interview (after core and PCG survey).

Refer to flowchart version 1.2.b for further illustration.

In the pilot version, only the possibilities presented in (b) and (c) were employed. For the LSPAC conducted on the phone (flowchart version 1.2.c), a

[62] A few parents were interviewed a few months earlier when the survey instruments were finalized.

script was used to request permission to visit the home for administering the activity component of the study (this process had been followed in the pilot cities).

2. Sample Counts and Attrition Overtime

Similar to most other longitudinal surveys, attrition is an issue that researchers will have to face when analyzing the FFCWS data across survey periods.

At Year 5, about eighty-five (84.7) percent of the baseline respondents completed the Core Mother survey. Due to budget constraints at the beginning of the In-Home Study, we selected only one-third of the respondents in each of two pilot cities for inclusion in the In-Home Study. In addition, interview fatigue appeared to be another drawback in survey participation. As such, roughly seventy-four (74) percent of the Year 5 Core mother respondents completed the Year 5 In-Home Study. Overall, about fifty percent of the respondents of the baseline survey participated in all five succeeding surveys: Year 1 Core (mother survey), Year 3 Core (mother survey), Year 3 In-Home, Year 5 Core (mother survey), and Year 5 In-Home survey.

2.1. Response Rate

Overall, a total of 3,784 parents or caretakers were contacted for the Year 5 In-Home Study. Only cases *eligible* for the In-Home Study with their status of survey participation are presented in Table A2 and A3. It should be noted that not all eligible respondents of the Year 5 Core mother survey were invited to participate in the In-Home Study because of the following reasons:

1. financial constraints at the start of the Year 5 In-Home survey. To offset the cost, we sampled 100 families who participated in the Year 5 Core survey (nearly one-third of the eligible respondents) from each of two pilot cities. These sampled families were invited to participate in the In-Home Study;

2. other shortcomings encountered during the time of data collection.

Among the 3,700 attempted eligible from the Core survey respondents: 3,001 completed either a full Year 5 In-Home Study or a component of the Study. As such, the overall crude response rate is about 81 percent. Response rate based on race and relationship of mother and father at the time of conducting the Year 5 Core survey are presented in Table A1 and A2.

Table A1: Crude Response Rate by Race of Mother

Mom's Race	Y5 In-Home Respondent	Total Cases Contacted	Crude Response Rate (%)
Missing race	6	7	85.71
White, Non-Hispanic	638	789	79.82
Black, Non-Hispanic	1545	1850	82.70
Hispanic	749	915	81.20
Other	85	85	52.94
Total	3023	3700	81.11

Table A2: Crude Responses by Relationship of Mother and Father at Year 5

Relationship	In-Home Respondent	FF Core Respondent	Crude Response Rate (%)
Missing relationship*	3	6	66.67
Married	905	1123	79.70
Romantic	491	608	79.93
Separate	331	397	82.87
Friends	573	693	82.40
No Relationship	712	862	82.13
Unknown	8	11	72.72
Total	3001	3700	81.11

Due to shortcomings in the administration of data collection, 23 cases (not belonged to the sample selected for the FFCWS) were mistakenly interviewed. These cases[63] had been included for a separate study or other purposes in all waves of the Core survey for the convenience of data collection. As such, they were excluded in the public use data of the In-Home Study.

[63] These cases belonged to a separate group of 109 cases included in the Baseline FFCWS survey. These cases were selected for the TLC3 study or for other related research purposes.