Fourth National Incidence Study of Child Abuse and Neglect (NIS-4)

Public Use File Manual

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For copies of the NIS-4 *Report to Congress*, supplementary NIS-4 reports, and reports from prior NIS studies, visit the National Incidence Study webpage at the Child Welfare Information Gateway at http://www.childwelfare.gov/systemwide/statistics/nis.cfm. The NIS-4 *Public Use File*, this manual, the *Report to Congress*, and the three NIS-4 technical reports (*Design and Methods Summary, Analysis Report, Data Collection Report*), are available from the National Data Archive on Child Abuse and Neglect (NDACAN), Cornell University, Bronfenbrenner Center for Translational Research, Ithaca, NY 14853, (607) 255-7799; e-mail: NDACAN@cornell.edu; website: http://www.ndacan.cornell.edu. NDACAN also provides technical assistance.

> Sedlak, A.J., Mettenburg, J., Brown, J., Basena, M., and Madden, K. (2010). *Fourth National Incidence Study of Child Abuse and Neglect (NIS–4) Public Use File Manual*. Prepared under contract to the U.S. Department of Health and Human Services. Rockville, MD: Westat, Inc.

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1. INTRODUCTION

This manual documents the contents of the Public Use File that contains the analysis data from the Fourth National Incidence Study of Child Abuse and Neglect (NIS–4). This introduction briefly summarizes the study design and methodology, identifies the data contained in the NIS–4 Public Use File, and dictates important procedural guidelines for use of the data.

Users are encouraged to verify their understanding of the contents of the NIS–4 Public Use File by calculating some of the known estimates provided in the NIS–4 Report to Congress. To better understand the nature of the data and the constraints that govern their use, it may also be helpful to consult one or more of the following NIS–4 technical reports:

- *The Design and Methods Summary* describes the key features of the study design and procedures. This report is provided as Appendix A of *The NIS–4 Report to Congress*. It reports on the design and selection of the study samples and on the recruitment activities and results. It also summarizes components that other reports in the series describe in greater detail: data collection, evaluative coding, unduplication, and weighting. It also outlines the design and activities of the three NIS–4 supplementary studies, which are the subjects of three independent reports.

- *The Data Collection Report* describes all data collection activities, including project management, progress tracking and quality control, the data collection procedures, and the numbers of different data forms ultimately received.

- *The Analysis Report* details the data processing steps, including the data retrieval and cleaning processes, basic and evaluative coding, the unduplication and unification of child records, the weighting and nonresponse adjustment approaches, the derivation of the annualization multipliers, and the development of the national estimates and variances.

1.1 Summary of the Study Design and Methodology

The National Incidence Study (NIS) is a congressionally mandated, periodic effort of the United States Department of Health and Human Services. The Keeping

Children and Families Safe Act of 2003 (P.L. 108-36) mandated the NIS–4, which collected data in the fall 2005 and the spring of 2006. The principal objectives of the NIS–4 were to provide updated estimates of the incidence of child abuse and neglect in the United States and measure changes in incidence from the earlier studies.

The NIS serves as the nation's needs assessment on child abuse and neglect. It offers a unique perspective on the scope of the problem by going beyond the children that child protective service (CPS) agencies investigate. Although the NIS includes children investigated by CPS agencies, it also obtains data on other children who are recognized as maltreated by community professionals but not reported to CPS or screened out by CPS without investigation. Thus, the NIS estimates include both abused and neglected children who are in the official CPS statistics and those who are not.

The NIS follows a nationally representative sample design, so the estimates reflect the numbers of abused and neglected children in the United States who receive CPS investigation or come to the attention of community professionals. The fact that there have been three previous NIS cycles using comparable methods and definitions means that one can compare NIS–4 estimates with those from the earlier studies in order to identify changes over time in the incidence and distribution of abused and neglected children.

The NIS uses standard definitions of abuse and neglect, so its estimates of the numbers of maltreated children and incidence rates have a calibrated, standard meaning across the various sites (multiple states and agencies), sources (CPS and community professionals), and NIS cycles. As in previous cycles, children submitted by sentinels and those described in the CPS sampled cases were evaluated according to standard study definitions of abuse and neglect, and only children who fit the standards were used in generating the national estimates.

The NIS applies two definitional standards in parallel: the Harm Standard and the Endangerment Standard. The Harm Standard is relatively stringent in that it generally requires that an act or omission result in demonstrable harm in order to be classified as abuse or neglect. It permits exceptions in only a few specific maltreatment categories, where the nature of the maltreatment itself is so egregious that one can infer that the child was harmed. The chief advantage of the Harm Standard is its strong objectivity. Its principal disadvantage is that it is so stringent that it provides a

perspective that is too narrow for many purposes, excluding even many children whom CPS substantiates or indicates as abused or neglected.

The Endangerment Standard includes all children who meet the Harm Standard but adds others as well. The central feature of the Endangerment Standard is that it counts children who were not yet harmed by abuse or neglect if a sentinel thought that the maltreatment endangered the children or if a CPS investigation substantiated or indicated their maltreatment. In addition, the Endangerment Standard is slightly more lenient than the Harm Standard in allowing a broader array of perpetrators, including adult caretakers other than parents in certain maltreatment categories and teenage caretakers as perpetrators of sexual abuse.

Data users can find additional information about the NIS–4 definitions in Chapter 2 of *The NIS–4 Report to Congress,* the *Design and Methods Summary* and the *Analysis Report*.

Following procedures that paralleled those used in earlier NIS cycles, the NIS–4 study team unduplicated the data (so the study estimates represent each maltreated child only once), weighted the records (so the sample data could generate national estimates of the number of maltreated children), and annualized the final weights (to enable the 3-month reference periods to provide estimates reflecting the number of children maltreated during a full year). Details about the evaluative coding, unduplication, unification and weighting processes are given in the *Analysis Report*.

In addition to the main study, the NIS–4 included several supplementary studies, three of which are germane to interpreting the main study findings. Two of the studies surveyed CPS agencies—one on their overall policies, procedures and practices (*CPS Structure and Practices Mail Survey – SPM*) and the second on their screening standards, to determine how they would treat referrals concerning the uninvestigated cases that sentinels identified (*CPS Screening Policies Study – SPS*). The third supplementary study (*Sentinel Definitions Survey – SDS)* surveyed community professionals who served as sentinels in the main NIS–4 in order to discern the boundaries of situations they perceive to be abuse and neglect and learn what they say they would do in response to the different types of child maltreatment situations included in the NIS.

1.2   Contents of the NIS–4 Public Use File

The NIS–4 Public Use File includes the analysis data from the NIS–4 main study and a few data items from the SPS and the SDS studies that were used in analyses to help understand the main study data. (These latter analyses are described in Chapter 8 of the *NIS–4 Report to Congress*.)

Records in this file reflect the information on children who were submitted to the study on Sentinel Data Forms, CPS Maltreatment Data Forms, or both. The children's records in this file all describe maltreatment that NIS–4 staff evaluatively coded in accordance with the procedures described in the NIS–4 *Analysis Report*. In evaluative coding, coders assess the details of each form of suspected maltreatment against the required elements of the NIS definitions, deciding whether the case fits each element. Children whose maltreatment experiences fit the definitions are called "countable" and included in the study estimates of maltreated children.

Figure 1-1 below schematically diagrams the NIS–4 information base, showing the different categories of NIS children and how they logically relate to each other. The relative sizes of the rectangles are not necessarily meaningful. The important features of this figure are the set and subset relationships it conveys. This figure is helpful in understanding and explaining the contents of the NIS–4 Public Use File.

The NIS–4 Public Use File contains the records of children in sections labeled **a**, **b**, **c**, **d**, and **e** in Figure 1-1. That is, the NIS–4 Public Use File includes all countable children and also includes children who were not countable under either standard, but were chemically dependent newborns submitted to the study by a sentinel or described in a CPS investigation.

With the exception of the non-countable chemically dependent newborns, the Public Use File does *not include* children who were not countable but whose maltreatment was described to the study by a sentinel (section **f**) or in a CPS agency investigation (section **g**). Additionally, the file does *not contain* every data item on every data collection form, but only those items that can be used to generate valid national estimates. The discussion below returns to this issue with additional explanation.
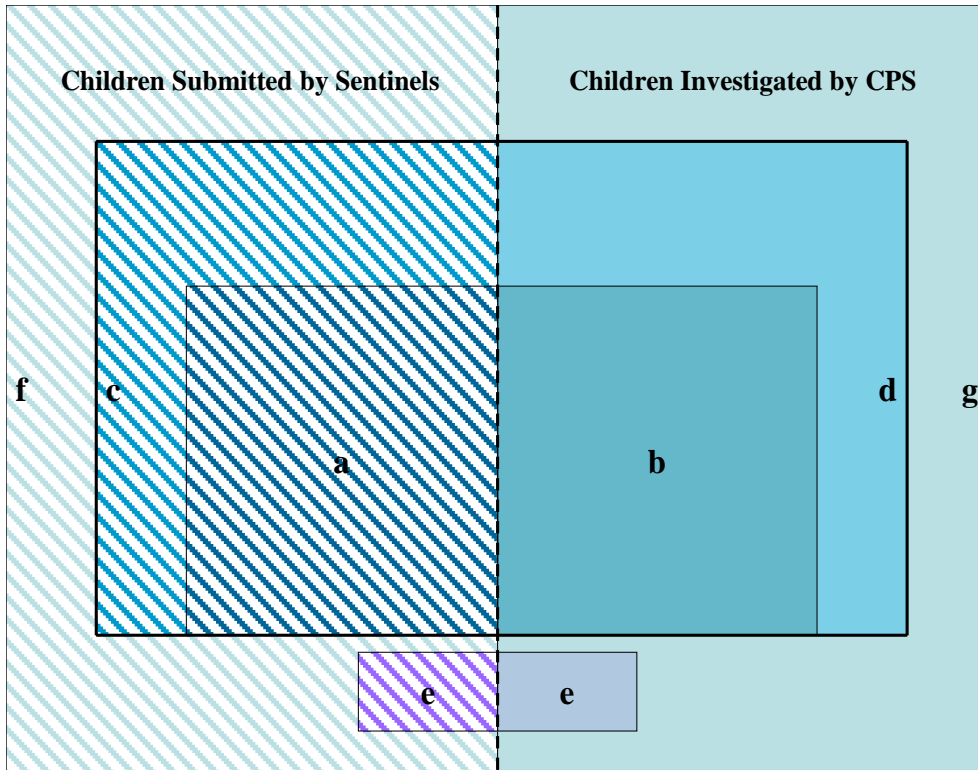
Figure 1-1.   Categories of Children in the NIS–4 Data.

The center rectangle that includes the sections labeled "*a*" and "*b*," taken together, represent all the children whose maltreatment fit the Harm Standard. The next larger rectangle, comprising the four sections labeled "*a*", "*b*," "*c*," and "*d*," represents those whose maltreatment fit the Endangerment Standard. As conveyed by the fact that the larger rectangle contains the center rectangle, the set of Endangerment Standard children includes all children who fit the Harm Standard as well as other children who fit only the Endangerment Standard. As noted above and in the NIS–4 technical reports, the additional Endangerment Standard children in sections "*c*" and "*d*" are primarily children who were not actually harmed but who were endangered by their maltreatment. Thus, sections "*a*," "*b*," "*c*," and "*d*" together represent all countable children in the NIS–4. The smaller rectangle, section "*e*," represents the chemically-dependent newborn children who had no other form of maltreatment countable under the Harm or Endangerment Standard after their birth. Children born with chemical dependency do not meet the countability criteria under either NIS Standard. The public use file includes these children because they are of general interest to the field and the NIS can provide a national estimate of their number. Sections "*a*," "*b*," "*c*," "*d*," and "*e*" reflect all the children in the public use file.

All of the children in Figure 1-1 were reported to the NIS–4 by Sentinel agencies or were listed in the sampled CPS investigation cases. Some of the children who fit each definitional standard were among those whose maltreatment was investigated by CPS. That is, as the figure shows, section "*b*" children were countable under the Harm Standard and their maltreatment was investigated by CPS; children in sections "*b* and "*d*" were countable under the Endangerment Standard and their maltreatment was investigated by CPS. The remaining countable children under each standard (i.e., those in sections "*a*" and "*c*") were reported by sentinel agencies but did not have their maltreatment investigated by CPS. The not countable chemically-dependent newborns in section "*e*" were submitted to the NIS by sentinels or were investigated by CPS.

Children represented in Figure 1-1 in sections labeled "b" and "d" should be distinguished from those in sections "a" and "c" only through the variables CPSH (CPS investigated Harm Standard maltreatment), CPSE (CPS investigated Endangerment Standard maltreatment), NCPSH (CPS did not investigate Harm Standard maltreatment), and NCPSE (CPS did not investigate Endangerment Standard maltreatment). These were defined on the basis of the critical variable CPSROL (CPS's Role), which took into account all the information on all the data forms in a duplicate grouping in order to determine whether the child's maltreatment had received investigative attention.

Users should use the variable RECSOURC (Recognition Source) to identify the agency source that recognized the child's maltreatment. RECSOURC took into account all the sources on all data forms listing that child. For children who received CPS investigation of their maltreatment, RECSOURC also took into account the sources who reported the child to CPS. Thus, RECSOURC provides the more comprehensive summary concerning the source that recognized the child as maltreated.

The records in this file reflect unduplicated children whose records have been unified. That is, children submitted to the study by multiple sources are represented in this database by only one record. Unification rules, described in the NIS–4 Analysis Report, select one data form to represent the child from the multiple data forms submitted to the study. The specific data form chosen to represent a given child in this final analysis database was the data form with the "best" information on the countability of the

child's maltreatment (i.e., the child's "fit" with the study's definitional standards of abuse and neglect) and the most complete information (i.e., minimum missing data).

The process of case unification between Sentinel and CPS data sources meant that some of the children who were submitted to the study by a sentinel were discovered to be among the children whose maltreatment was investigated by CPS. As described above, this intersection was captured in the variable CPSROL. Note that such a child could have been identified among those investigated by CPS through either a CPS Maltreatment Data Form or a CPS Summary Data Form. If the determination was made on the basis of a CPS Maltreatment Data Form, then the NIS gathered some additional information about the CPS agency activity on the case, but if that determination was made on the basis of a Summary Data Form, then NIS collected only a few data items. As a result, there are quite a number of children in the NIS–4 Public Use File who are identified as having had their maltreatment investigated by CPS but for whom very little else can be said about their CPS investigation. Because the NIS–4 main analysis file cannot be meaningfully used to provide nationally representative estimates on the CPS investigation experiences of any children, the NIS–4 Public Use File does not include information about features of the CPS investigations on the CPS Maltreatment Data Forms.[1]

All of the children in the NIS–4 Public Use File were evaluatively coded and, regardless of the type of data form that was selected to represent them in the final analysis, all the information about them is presented in the form of a unified data record.

This manual accompanies an html file of the public use codebook. That codebook provides the names of all the variables contained in the NIS–4 Public Use file, provides the meanings of their code values, and explains whether and how the variables relate to the original data items on the data forms or to the evaluatively coded variables.

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[1] For example, the CPS Maltreatment Data Form asked about the disposition of the investigation. Evaluative coders used this information to decide Endangerment Standard countability (i.e., the NIS considers that children whose maltreatment was substantiated were, at the very least, endangered by maltreatment). However, when a child entered the study on multiple data forms (e.g., a CPS Maltreatment Data Form and a Sentinel Data Form), the unduplication and unification processes identified that the child was duplicated in the data and unified the child to a single record. The record selected to unify the child depended on a number of considerations (described in the *NIS–4 Analysis Report*) and it was not always the CPS Maltreatment Data Form. Thus, the information about CPS investigation dispositions is not included in the Public Use File because the final NIS–4 analysis file does not contain nationally representative information about this characteristic.

The NIS–4 Public Use File is available from the National Data Archive on Child Abuse and Neglect.[2] Please see the *READ_ME_FIRST* document in the data file for the available formats and file versions. The ensuing sections of this introduction further explain the contents of the NIS–4 Public Use File and Chapter 2 provides specific guidelines for the use of the data file.

1.3   Using the NIS–4 Public Use File

The weights in this file are designed to provide the most precise estimates for children who were countable under the NIS definitions. The data file includes all the countable children (n=12,408) and as well as drug-affected newborns (n=286) who were noncountable but who entered the NIS through either a CPS or sentinel data form. It should be emphasized that these latter children are not countable under the NIS definitions on the basis of being drug-affected, but they reflect children who are of policy interest in their own right and so were included on the public use file here. Also, some of the drug-affected newborns may have experienced other maltreatment that is countable, so the 286 noncountable drug-affected newborns are not the only drug-affected newborns on the file.

Some universal principles that must be followed whenever using the NIS–4 Public Use File (the need to always use weights and the need to conduct significance tests via methods that take the sample design into account). Some properties of the data may require special explanation (clarification of several key variables and on the distribution of certain categories of data items). The ensuing sections discuss these issues.

Required Use of Weights. It is crucial that any and all analyses of the data in this file use CHAWT (Child Weight). All frequency distributions that are run should be weighted frequency distributions using the variable CHAWT as the weight. All computations of percentages or proportions should also be weighted, using CHAWT to weight the components of both the numerator and denominator of the proportion of interest. The reason that weighted analyses are critical is because the NIS–4 data were

obtained through a complex sampling design (described in the NIS–4 Sample Report), in which children were selected with unequal probabilities. This means that the prevalence of a given type of child in the NIS–4 sample of maltreated children may bear little relationship to that type of child's prevalence in the overall population of maltreated children.

For instance, children who died as a result of abuse or neglect are overrepresented in the NIS–4 sample (they were selected with certainty in CPS agencies). All non-fatal types of abuse or neglect cases were sampled (or, in some agencies, the NIS took all). The children's weights (CHAWT) correctly adjust for this, so that each child represents the correct number of children in the nation in the weighted estimates. Similarly, cases seen by different types of community sentinels typically came into the study with different probabilities. For example, depending on the sample county involved, children who are recognized as maltreated at the county sheriff's department may be overrepresented in the sample relative to those who are recognized at day care centers in the county. Again, the weights (CHAWT) incorporate all the appropriate adjustments needed to ensure that children make their accurate contribution to the population estimates for the United States overall. Similarly, the NIS selected PSUs with probability proportional to size, had different rates of participation by sampled sentinels in different agency sectors, and obtained data that reflected a three-month reference period. The weights (CHAWT) correct for all these inequalities in representation in the sample, ensuring that estimates properly reflect the distribution of maltreated children in the nation. They do this by taking into account the different probabilities of selection into the sample, correcting for any loss (nonparticipation) of sampled agencies, sentinels, or cases, and annualizing the data so that it generates estimates of the numbers of children who are maltreated over the course of a year. Unless CHAWT is used, all these issues will seriously distort the estimates, producing essentially meaningless results.

Regression analyses must also take account of the nature of the sample design, and the use of CHAWT optimally does so. Although statisticians do disagree about whether it is always necessary to use weighting information in regression analyses,[3,4] they certainly agree on the need to take sample design factors into account in

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[3] Lepkowski, Landis, Parsons, and Stehouwer (1988).

[4] Smith (1984).

the model in order to obtain meaningful results—at least if such factors are likely to be related to the outcome of interest. The sheer complexity of the NIS–4 multiple-sample design makes it virtually impossible to do this with the NIS data. Hence, without exception, NIS–4 data users must always use CHAWT.

Significance Tests with the NIS–4 Data. Any significance tests must use a method for computing variance that is appropriate for the NIS–4 multi-stage sample design—meaning that standard statistical packages cannot be used. Standard statistical packages assume that the data derive from simple random samples with the elements of the sample statistically independent of each other. However, as described above and detailed in the Design and Methods Summary, the NIS–4 used a multi-stage sample design that involved clustering of sentinels within agencies and clustering of agencies within counties. This means that there is a considerable degree of covariance in the NIS–4 data. In order for significance tests to yield meaningful results in this context, users must take special measures to compute unbiased variance estimates.[5] Otherwise, findings will be distorted by the misspecification effect.[6] This effect varies with the specific analysis in the NIS data, meaning that there is no simple "fix" for it in the context of standard statistical packages.

Westat currently provides free software, WesVar, that appropriately computes variances for analysis of NIS–4 data. Chapter 2 gives instructions for obtaining this specialized software package and describes its use with the NIS–4 data. WesVar requires replicate weights as well as the full sample weight in order to compute variances. The NIS–4 Public Use File includes a series of 62 replicate weights, CHAWT1 through CHAWT62, which will allow users to compute accurate variances through use of the jackknife replication approach. The NIS–4 analysts used this approach to compute all standard errors and test the significance of differences in the *NIS–4 Report to Congress*.

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[5] Lee. Forthofer, and Lorimor (1998).

[6] Skinner (1989).

1.4 NIS–4 Data File Structure

The NIS–4 data are structured as child-level records, with codes for both source variables (taken directly from data form entries) and derived variables. The data file has been subset to include only countable children plus noncountable children where at least one alleged form of maltreatment included chemical dependency. All child records on the file have a full-sample weight and 62 replicate weights. The data file contains 12,694 child level records and 1,844 variables.

Codebook Contents

For each variable, the codebook provides the following information:

- name
- label
- number (a sequence number from 1 to 1,874)
- type
- width
- number of explicit decimals
- column location on the text data file
- source (whether from a CPS Maltreatment Data Form or a Sentinel Data Form)
- question text (for source variables)
- explanation (clarification statement and derivation code, if applicable)
- code (value levels the variable can take and their definitions)
- frequencies (number of records with each value code)
- missing data code values (list of code values that reflect missing data)
- the number of valid values (cases with nonmissing value codes)
- parameters of the raw data codes (minimum value, maximum value, mean, standard deviation)

Additionally, the codebook includes user notes that mark and explain major categories of variables, as described in the next section.

Organization of the Codebook

The codebook variables are numbered sequentially and ordered as follows:

1	CHILDID
2 – 21	Countability Variables
22 – 32	Investigation and Recognition Sources
33 – 199	Data Form Items: Home
200 – 277	Child Variables
278 – 292	Family Derived Variables
293 – 490	Perpetrator Derived Variables
491 – 510	Maltreatment Outcome Variables
511 – 536	SPM and SPS Variables
537 – 560	Population Denominators
561 – 624	Weights
625 – 1844	Maltreatment Variables:
626 – 782	Sexual Abuse
783 – 932	Physical Abuse
933 – 1086	Emotional Abuse
1087 – 1248	Physical Neglect
1249 – 1394	Educational Neglect
1395 – 1554	Emotional Neglect
1555 – 1704	Other Maltreatment
1705 – 1844	Chemical Dependency

Appendix A provides instructions on how to import the NIS–4 ASCII Data into SAS or SPSS, using the data definition statements which are provided in a separate file. The NIS–4 data are also available in a WesVar datafile. Chapter 2 provides instructions on using the NIS–4 data in WesVar.

2. Using WesVar with the NIS–4 Public Use File

All of the estimates, rates, and statistical comparisons in the *NIS–4 Report to Congress* were produced using WesVar. WesVar is a software package that computes estimates and replicate variance estimates for data collected using complex sampling and estimation procedures. WesVar can be obtained on Westat's website at www.westat.com by clicking the Statistical Software link.

The NIS–4 data are provided in a WesVar file and in an ASCII file, with both SAS and SPSS data definition statement files. This chapter provides instructions on how to set up the NIS–4 Public Use File for analysis with WesVar, for users who choose to first import the ASCII data into SAS or SPSS (per Appendix A). The subsequent instructions indicate how to use WesVar for some basic analyses—to compute estimated totals, together with their correct standard errors and confidence intervals and how to calculate estimated rates per 1,000 children, together with the correct standard errors and confidence intervals. Additional instructions and help on how to use WesVar can be found on the Westat website.

2.1 Importing NIS–4 Pubic Use File

WesVar operates in a windows-based environment. Once you have installed WesVar, run the program by double-clicking on the WesVar icon that the installation process created. To import the NIS–4 data, select "New WesVar Data File" from the menu and identify your SAS or SPSS version of the NIS–4 Public Use File. Once the file has been imported, all of the variables contained in the file will initially appear in the SOURCE VARIABLES box. Using the arrows on the screen, you will need to move these variables into the other boxes on the screen as follows:

- Move the *"CHILDID"* variable to the *ID* box.

- Move the *"CHAWT"* variable to the *FULL SAMPLE* box.

- Move the replicate weight variables *(CHAWT1 – CHAWT62)* to the *REPLICATES* box.

- Move the remaining variables to the *VARIABLES* box.

- Select *JK2* in the *METHOD* box.

Exhibit 2-1 shows the window you should see after you have assigned all of the variables to the correct import box on the screen. At this point, create the WesVar version of the NIS–4 Public Use File by saving it. WesVar will ask you to name the new data file and it will assign the file a ".var" extension. The var file will have an accompanying log file that should always remain in the same folder with the var file. The log file maintains a running account of any recoded variables you compute within WesVar.
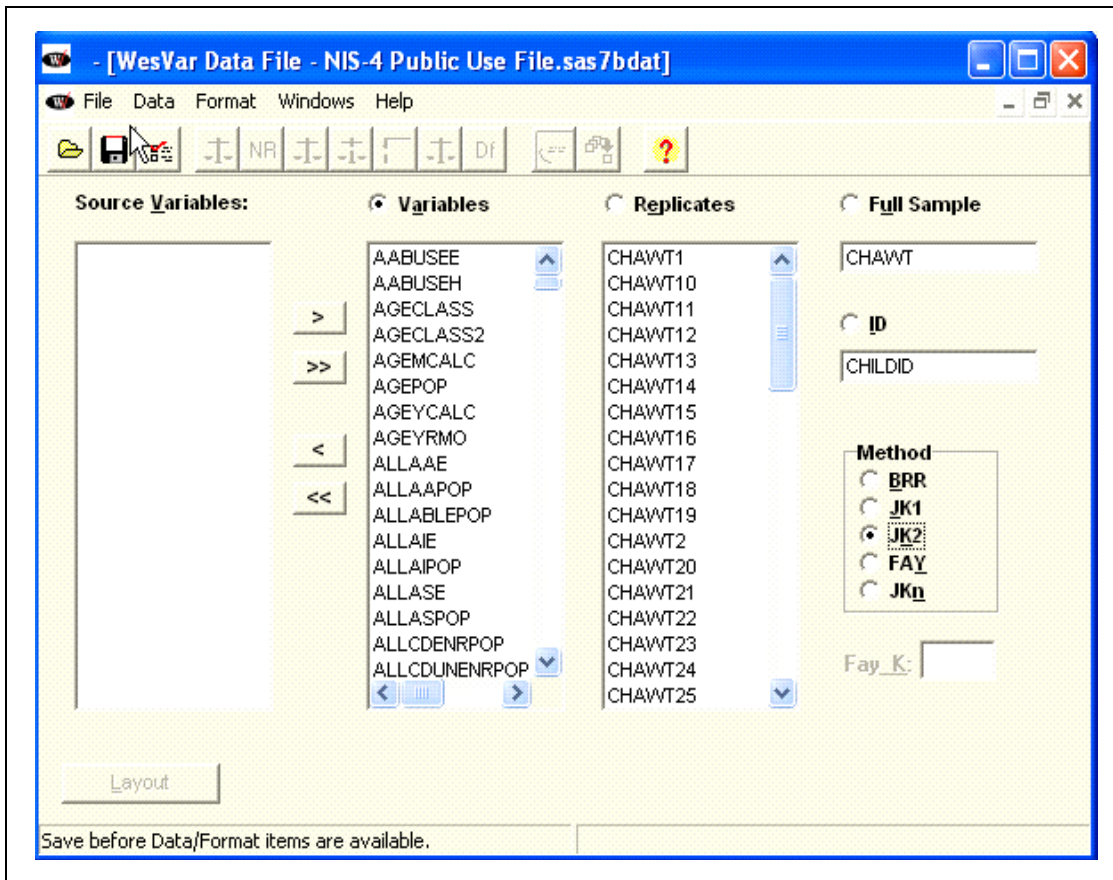
Exhibit 2–1.   WesVar Screen After Creating the NIS–4 WesVar Data File

2.2 Obtaining Overall Estimates with the NIS–4 Public Use File

You produce both estimates and rates by creating a new WesVar workbook and specifying your analysis. The following instructions demonstrate how to use the NIS–4 Public Use File to produce an estimate of the total number of children who experienced Harm Standard physical abuse.

Return to the main WesVar screen by closing the database screen. Select "New WesVar Workbook" from the main menu. Choose the data file (initially, this is the one you named following the instructions above) and click OK. Click on the "Workbook" node. To add a new table request, click "Table" under "New Request" on the right side of the screen. (You can name your workbook and table request for easy identification of the analysis you are running, by typing in the "Title" and "Request Name" boxes on the right side of the screen while you have those nodes selected on the left side of the screen.) Click "Add Table Set (single)." From the "Source Variables" box, select the variable PAH (Physical Abuse: Harm Standard) and move it to the "Selected" box. Click "Add as a New Entry" to complete the request. Now click on the new created table set variable "PAH" node so you can specify the type of output. On the right side of the screen, choose only the value and percent boxes under the "Sum of Weights" option as table output. Exhibit 2-2 shows the window that specifies the request you have created.
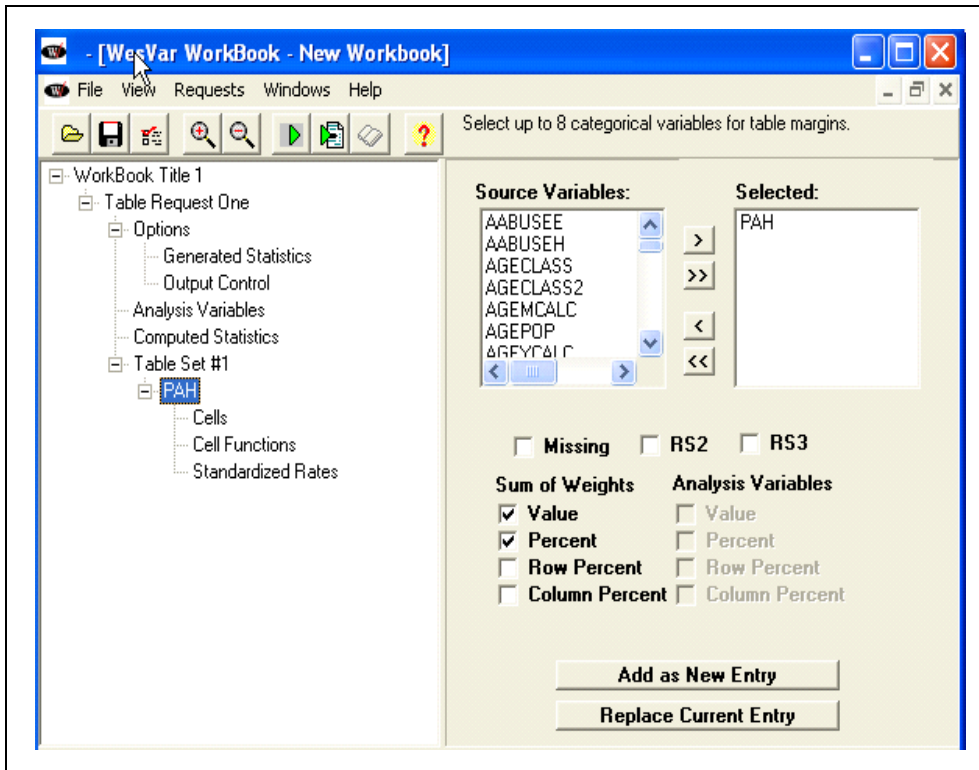
Exhibit 2–2.   Example of how to specify a Table request for data analysis

In this window, click on the GENERATED STATISTICS node to indicate which statistics WesVar should produce. Click on the boxes next to the options you elect, depending on your interest. Exhibit 2-3 shows the resulting "Generated Statistics" window.
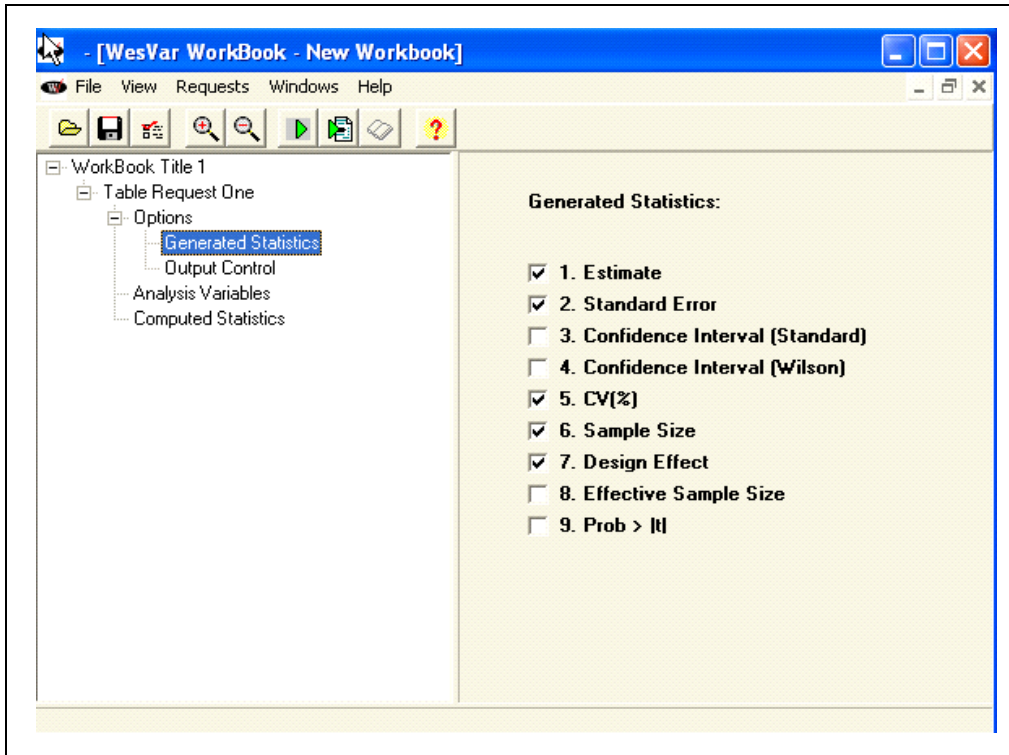

Exhibit 2–3.   'Generated Statistics' window

From this window, click on the OUTPUT CONTROL node to specify the format of the output WesVar should produce. Exhibit 2-4 shows the resulting "Output Control" window.
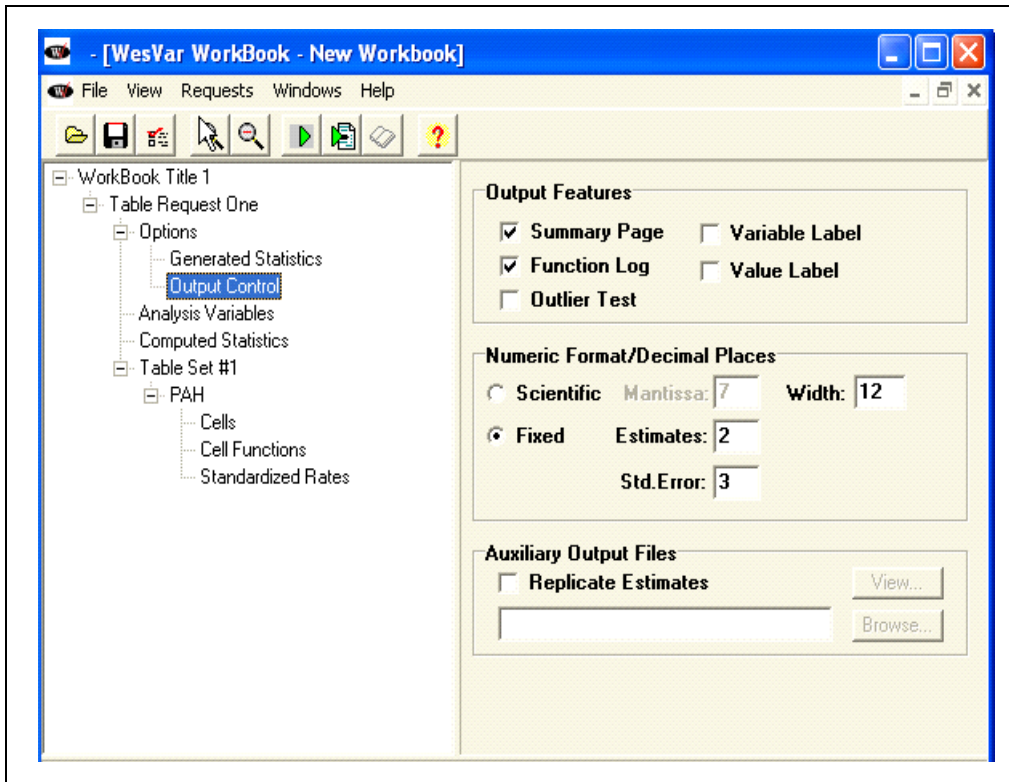
Exhibit 2–4.   'Output Control' window

Save the workbook before running the table request. (WesVar will ask you to name this workbook when you select Save under the File menu.) Run the table request by clicking on the RUN WORKBOOK icon (the left-most green arrow on the top tool bar). You will know when WesVar has finished computing your request when the VIEW OUTPUT (small book) icon on the top toolbar turns white. At this point, you can click on the VIEW OUTPUT icon to look at the result. Exhibit 2-5 shows the output. The top portion shows the output you see at the "Table Set" node. It indicates all your instructions. The bottom portion shows the screen you view at the "PAH" node, giving the estimate for Harm Standard physical abuse.
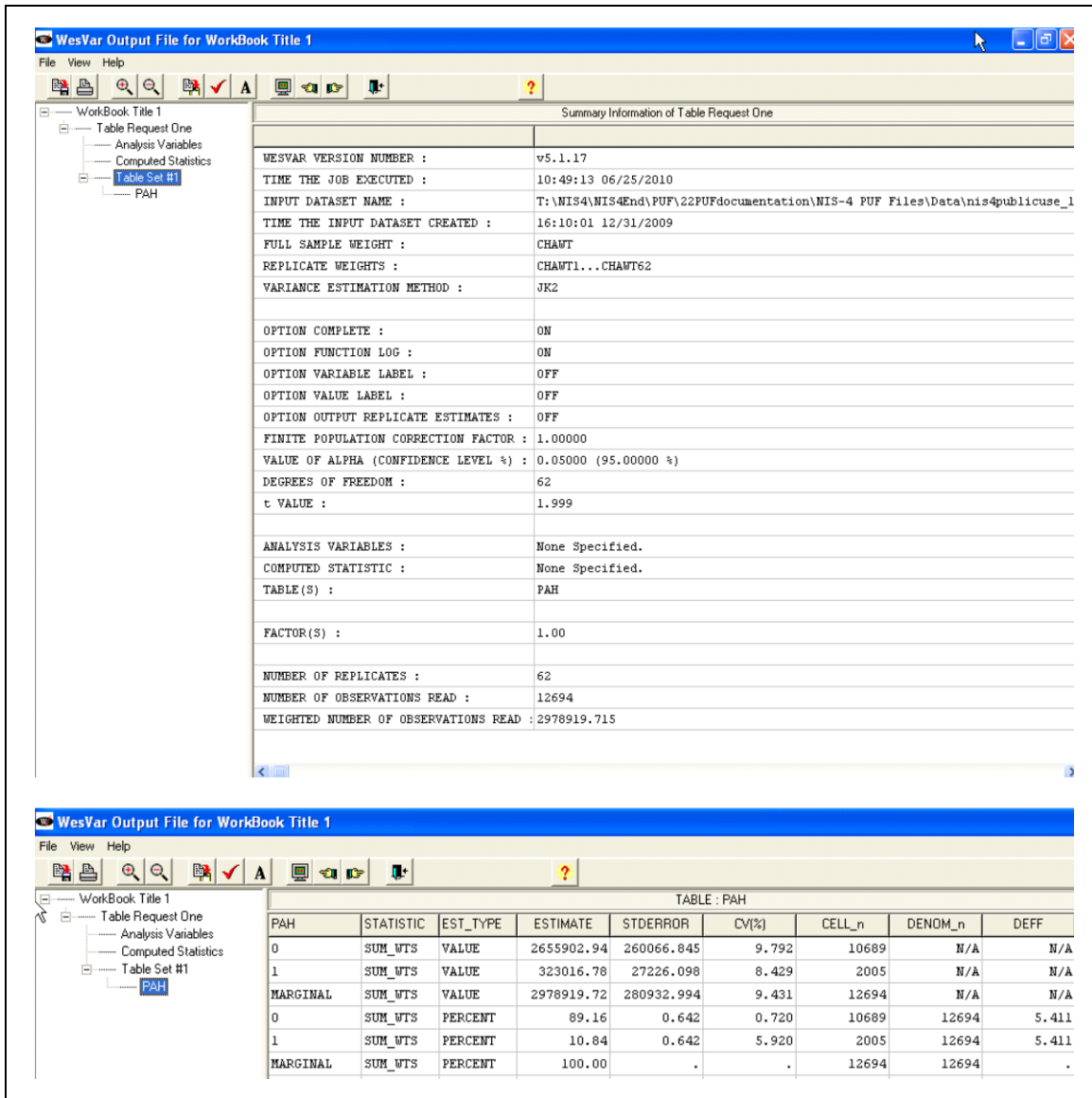
Exhibit 2-5.　　　Output (Results) of the analysis

2.3　　　Obtaining Estimates for a Subgroup with the NIS–4 Public Use File

　　　You can also obtain estimates for subgroups by using the "Table Request" menu. To determine the estimated numbers of boys and of girls who were physically abused under the Harm Standard, use the same workbook and add a new table request. Select the "Workbook" node and click on "Table" on the left of the screen. Click on new "Table Request" to subset to children physically abused under the Harm Standard. On

the right side of the screen, click on "Detail," which is to the right of the SUBSET box. In the "Subpop string" window, specify the group you want to subdivide in your analysis, i.e. PAH=1 (this specifies all children who experienced Harm Standard physical abuse). Exhibit 2-6 shows what you will see at this stage.
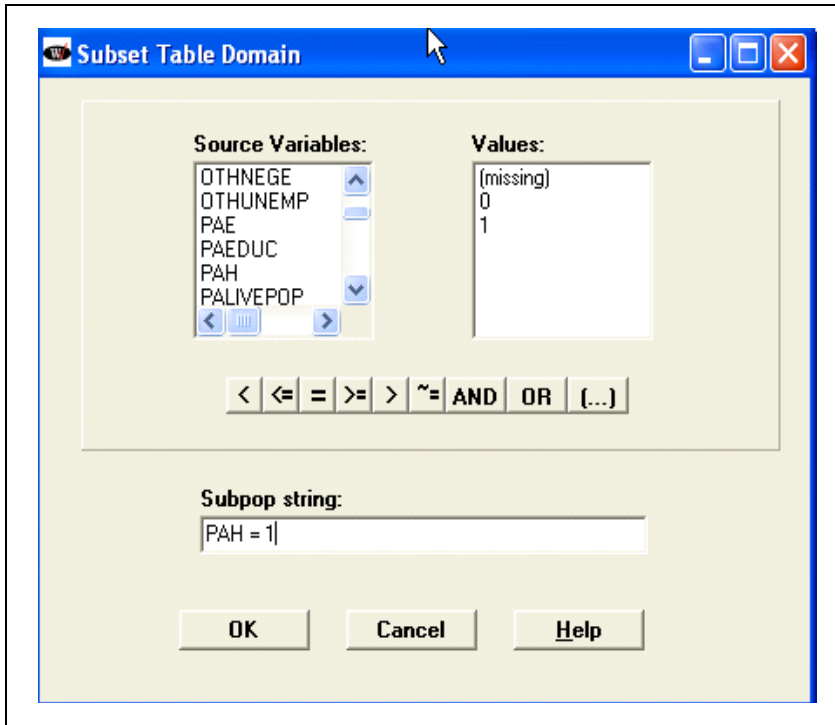
Exhibit 2–6.   Defining a Subgroup in the Subset Field

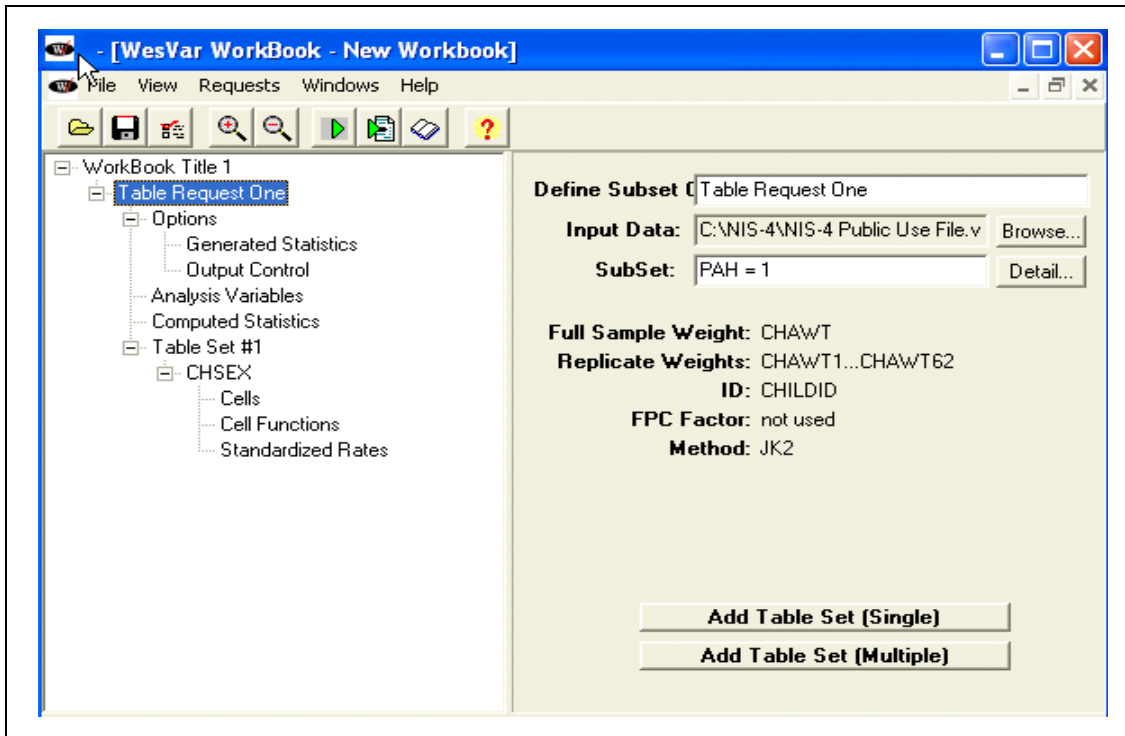Once the subset is completed, close the window to return to the "Table Request" window as shown below (Exhibit 2-7).

Exhibit 2–7.   Table Request for a Subgroup, All Children With Harm Standard
                Physical Abuse

Use the same output options as specified in section 2.2 above. Click on
"Table" to add a new table set in this subsetted table request. Click on "Add Table Set
(single)." From the "Source Variables" box on the left side of the screen, select the
variable CHSEX (Child sex) and move it to the "Selected" box.

Choose only the value and percent boxes under the "Sum of Weights" option
as table output. Save the workbook and RUN the request. The output now includes a
breakdown of the overall estimated Harm Standard physically abused children by sex, as
shown in Exhibit 2-8 on the next page.
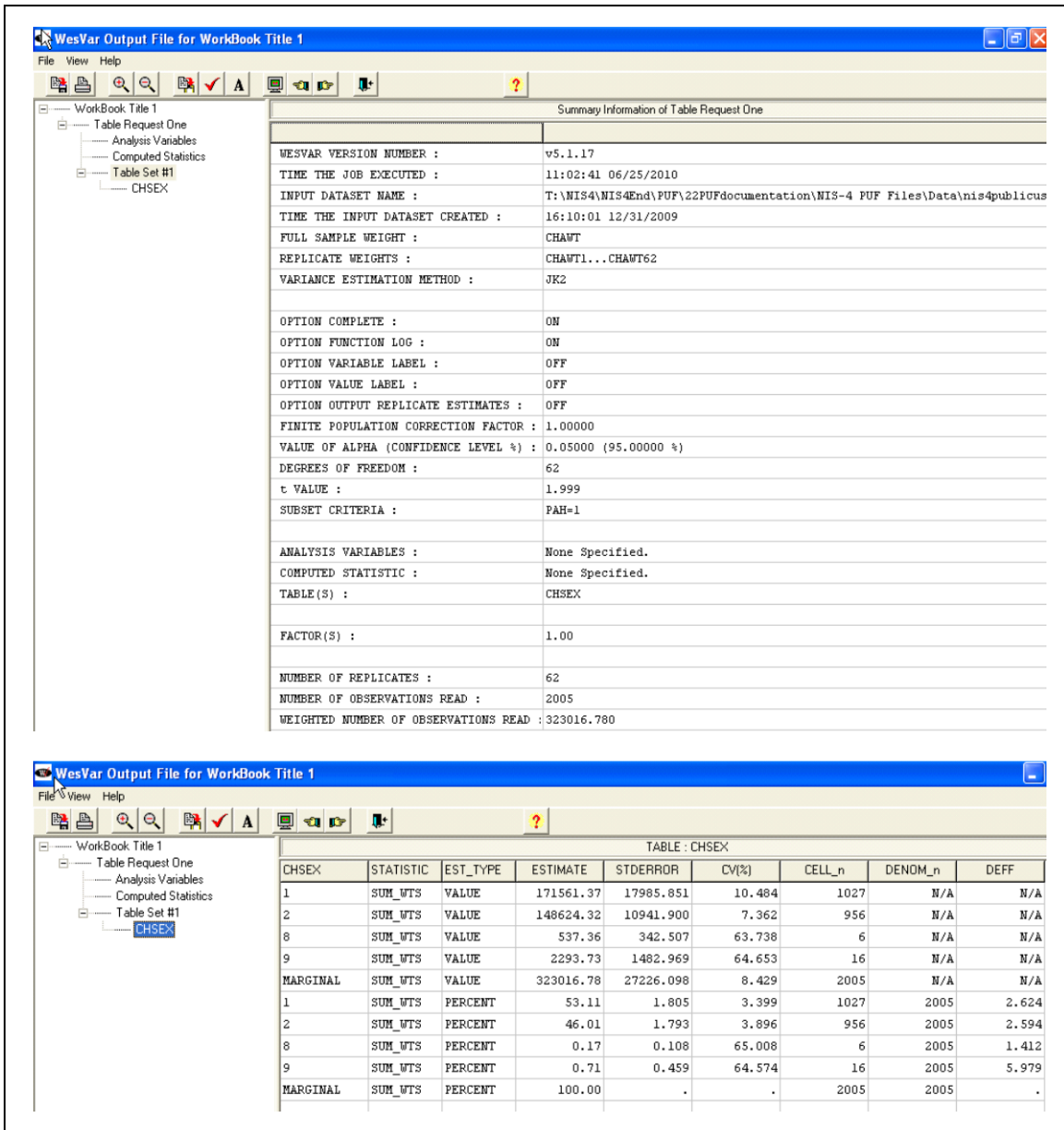
Exhibit 2–8.   Output Results from the Subgroup Analysis Specified in Exhibit 2–7

Note that the table output includes some children with CHSEX=9, which means their sex is unknown. If you want to exclude them from consideration, then return to the Table Request node and add this constraint to the subset instruction:

…AND CHSEX ~= 9

With that expanded subset instruction, run the workbook again. The new output will exclude children with unknown sex, and the percentages of children with

Harm Standard physical abuse who are male and female will be computed from those whose sex is known.

2.4   Obtaining Overall Rates with the NIS–4 Public Use File

To produce the estimated rate of Harm Standard physical abuse per 1,000 children, you will need to use a denominator that reflects the total number of children in the general population. The public use file provides denominators for a number of population groups, including the overall number of children in the United States at the time of the NIS–4. These denominators are attached to the record of every child who was countable as maltreated. To compute the rate per 1,000 children in the overall population of children, use the variable ALLPOP.[7]   Table 2-1 lists the population totals for computing rates per 1,000 for all maltreated children and for specific subgroups. These are all provided in the public use file.

To produce the estimated maltreatment rate of a specific subgroup, start a new WesVar Workbook, begin a new table request, and add a table set in which you specify that you want to see the children who experienced Harm Standard physical abuse (as demonstrated above). That is, click on "Table Set" and from the "Source Variables" box on the right side of the screen, select the variable PAH and move it to the "Selected" box. Choose only the value and percent for the table content under the "Sum of Weights."

To indicate that you also want to calculate the rate per 1,000 of Harm Standard Physical abuse, click on the COMPUTED STATISTICS node. On the right side of the screen, in the "Computed Statistic" box, enter

RATE=ONE/MEAN (ALLPOP)

This instruction, shown in Exhibit 2-9, multiplies each child's CHAWT by ONE and divides that result by the average of the ALLPOP value across all the children

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[7] The incidence rate calculations used population denominators derived from the 2005 and 2006 Annual Estimates of the Population (U.S. Census Bureau, 2008a) and the 2007 March Supplement of the Current Population Survey (U.S. Census Bureau, 2008d).

in the selected group (here, all children with Harm Standard Physical Abuse). Because ALLPOP is actually a constant, with the same value on each child's record, this instruction essentially divides each child's weight by ALLPOP and produces the sum for the group, which is equivalent to summing the weights within the group and dividing the sum by ALLPOP. The request is shown in the window on the next page.
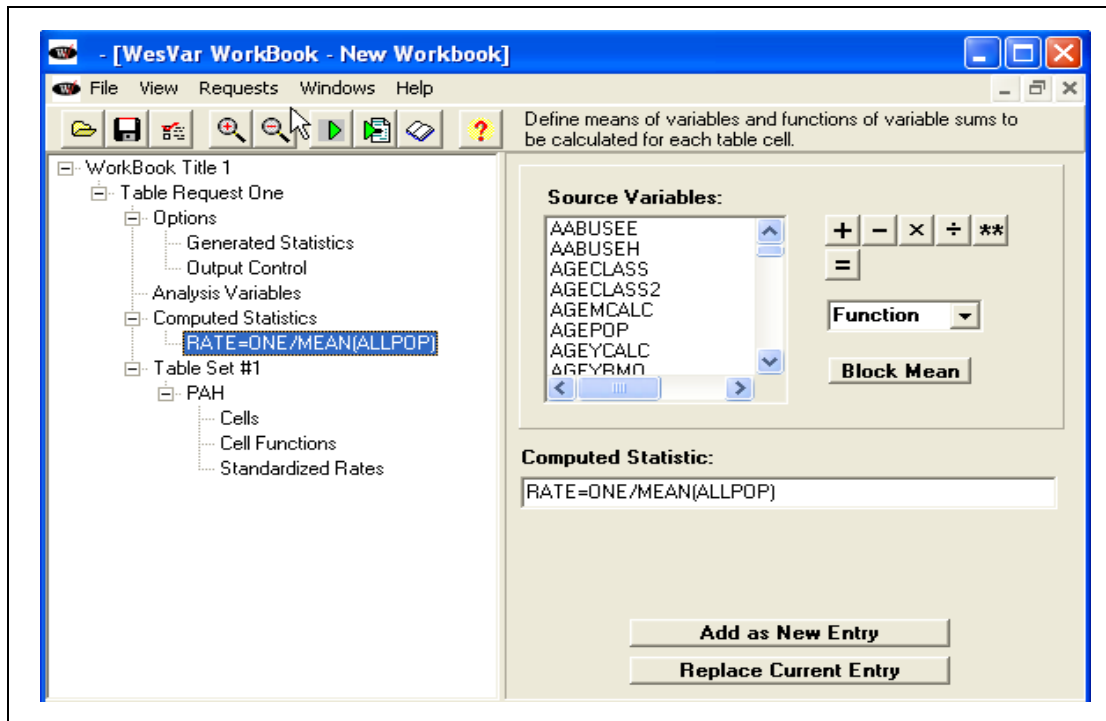

Exhibit 2-9.   Table Request showing how to obtain rates

SAVE the workbook and RUN the request. The output will include the overall rate of Harm Standard physical abuse, as Exhibit 2-10 shows. The results in this table show the incidence rate of Harm Standard physical abuse for children who experienced the maltreatment among every 1,000 children in the general child population. An estimated 4.4 per 1,000 children experienced harm standard physical abuse.

WesVar Output File for WorkBook Title 1

Summary Information of Table Request One

WESVAR VERSION NUMBER :	v5.1.17
TIME THE JOB EXECUTED :	10:28:32 06/25/2010
INPUT DATASET NAME :	T:\NIS4\NIS4End\PUF\22PUFdocumentation\NIS-4 PUF Files\Data\nis4publicuse_10.var
TIME THE INPUT DATASET CREATED :	16:10:01 12/31/2009
FULL SAMPLE WEIGHT :	CHAWT
REPLICATE WEIGHTS :	CHAWT1...CHAWT62
VARIANCE ESTIMATION METHOD :	JK2
OPTION COMPLETE :	ON
OPTION FUNCTION LOG :	ON
OPTION VARIABLE LABEL :	OFF
OPTION VALUE LABEL :	OFF
OPTION OUTPUT REPLICATE ESTIMATES :	OFF
FINITE POPULATION CORRECTION FACTOR	1.00000
VALUE OF ALPHA (CONFIDENCE LEVEL %)	0.05000 (95.00000 %)
DEGREES OF FREEDOM :	62
t VALUE :	1.999
ANALYSIS VARIABLES :	None Specified.
COMPUTED STATISTIC :	RATE=ONE/MEAN(ALLPOP)
TABLE(S) :	PAH
FACTOR(S) :	1.00
NUMBER OF REPLICATES :	62
NUMBER OF OBSERVATIONS READ :	12694
WEIGHTED NUMBER OF OBSERVATIONS REA	2978919.715

WesVar Output File for WorkBook Title 1

TABLE : PAH

PAH	STATISTIC	EST_TYPE	ESTIMATE	STDERROR	CV(%)	CELL_n	DENOM_n	DEFF
0	SUM_WTS	VALUE	2655902.94	260066.845	9.792	10689	N/A	N/A
1	SUM_WTS	VALUE	323016.78	27226.098	8.429	2005	N/A	N/A
MARGINAL	SUM_WTS	VALUE	2978919.72	280932.994	9.431	12694	N/A	N/A
0	SUM_WTS	PERCENT	89.16	0.642	0.720	10689	12694	5.411
1	SUM_WTS	PERCENT	10.84	0.642	5.920	2005	12694	5.411
MARGINAL	SUM_WTS	PERCENT	100.00	.	.	12694	12694	.
0	RATE	VALUE	36.07	3.532	9.792	10689	N/A	N/A
1	RATE	VALUE	4.39	0.370	8.429	2005	N/A	N/A
MARGINAL	RATE	VALUE	40.46	3.815	9.431	12694	N/A	N/A

Exhibit 2-10.   Output Showing Incidence Rate per 1,000 for Harm Standard Physical Abuse

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Table 2-1. Population Totals for Computing Rates per 1,000 for All Maltreated Children and for Specific Subgroups

Population Total	Group/Subgroup(s) of Interest	Variable Names and Values	Populations Total(s)
ALLPOP	All Maltreated Children		73,635.000
SEXPOP	Sex	CHSEX	
	Male	1	37,685.000
	Female	2	35,950.000
AGEPOP	Age	AGECLASS	
	0-2 Years Old	1	12,292.000
	3-5 Years Old	2	12,069.000
	6-8 Years Old	3	11,682.000
	9-11 Years Old	4	12,067.000
	12-14 Years Old	5	12,643.000
	15-17 Years Old	6	12,882.000
RACET4POP	Race/Ethnicity	RACET4	
	White	1	42,623.000
	Black	2	10,797.000
	Hispanic	3	14,752.000
	Other	4	5,462.000
NCHPOP	Number of Children	NCHILDR	
	1 Child	1	16,791.000
	2 Children	2	28,919.000
	3 Children	3	17,413.000
	4 or more Children	4 or more	10,511.000
METPOP	Metrostatus	METSTAT03	
	Major Urban	1	40,161.000
	Urban	2	21,768.000
	Rural	3	11,706.000
INHSTATPOP	Parent Structure 1	INHSTATP	
	One Parent	1	19,043.0000
	Two Parents	2	52,143.00
	Neither Parent	3	2,449.000
INHSTONEPOP	Parent Structure 2	INHSTONE	
	Mother Only	1	16,654.000
	Father Only	2	2,389.000
LIVESTRUCT2POP	Family structure and parental living arrangement	LIVESTRUCT2	
	Married parents, both biological	1	44,799.000
	Married parents, other legal arrangements	2	5,152.000
	Unmarried parents	3	2,192.000
	Single parent, with partner	4	2,081.000
	Single parent, no partner	5	16,962.000
	Neither parent	6	2,449.000
EMPSUMPOP	Parents' Employment Status	EMPSUM	
	Any parent unemployed	1	8,986.000
	Parent(s) employed	2	58,218.000
	Parent(s) not in the labor force	3	3,982.000
	Neither parent	4	2,449.000
LOWSESPOP	Family of low socioeconomic status	LOWSES2	
	No	0	53,885.000
	Yes	1	19,750.000

2.5   Obtaining Rates for Subgroups with the NIS–4 Public Use File

To determine the rate of Harm Standard physical abuse separately for girls and for boys, use the sex population variable (SEXPOP). On girls' records, this variable indexes the total number of girls in the general population at the time of the NIS–4; on boys' records, it indexes the total number of boys in the general population. To compute the rates for these subgroups, you can either open a new workbook or add a table request to an existing workbook. Click on table request and "Add a Table set". Select CHSEX as your analysis variable from the Source Variables list.

To calculate the rate of Harm Standard Physical abuse for boys and girls, click on the COMPUTED STATISTICS button and enter RATE=ONE/MEAN(SEXPOP) in the box on the right hand side of the screen. Click on the table request node to subset the analysis to Harm standard physical abuse (PAH=1). Specify the type of output you would like to produce as in the sections above.

SAVE the workbook and RUN the request. The output now includes the rate of Harm Standard physical abuse for each sex, as shown in Exhibit 2-11. The results show that boys experienced Harm Standard physical abuse at a rate of 4.1 per 1,000 boys in the population while the girls experienced similar maltreatment at a rate of 4.6 per 1,000 girls in the population. The rates for children where sex was unknown are not calculated. In WesVar, these cases are excluded and not shown in the results because they have no population denominator. The SEXPOP was computed for children where sex was known.

Exhibit 2-11. Output Showing Incidence Rates per 1,000 for Harm Standard Physical Abuse for Boys (CHSEX = 1) and Girls (CHSEX = 2)

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APPENDIX A

IMPORTING NIS-4 DATA INTO SAS OR SPSS,
USING THE NIS–4 DATA DEFINITIONS

To facilitate importing the NIS–4 data into a statistical analysis system, SAS and SPSS data definitions statements accompany the data file. The data definition statements include the programming statements required to create a system file and assign variable labels, formats or value labels, and missing data codes.

The data definition statements are not complete programs. Users will need to modify the data file path specified on the SAS INFILE statement or the SPSS FILE HANDLE command to point to the actual location of the NIS–4 ASCII data file on their computer system. Depending on the mode in which the user interacts with the respective statistical analysis system (i.e. batch, command line, or interactive), it may be necessary to add a RUN statement at the end of the SAS data definition statements or an EXECUTE command at the end of the SPSS data definition statements. The user must add any analysis commands/statements.

Please note that when importing the data into SAS, it might not be possible to use all the user-defined formats at once. The number of user-defined formats may exceed the number of formats that can be assigned to a SAS data set.