NATIONAL SURVEY ON CHILDREN'S EXPOSURE TO VIOLENCE*:*
A SURVEY OF PARENTS AND CHILDREN AGE 0-17

Methods Report

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INTRODUCTION TO THE SURVEY

Under a grant from the Department of Justice, the University of New Hampshire conducted a national survey on issues of children's safety and victimization in the United States. This telephone study was conducted to better understand problems facing children and families today. For this study, 4,500 families across the country were interviewed to find out about stressful events that happen to some children, and how schools and various agencies may better protect kids from dangerous situations. Telephone numbers were selected at random to represent a national sample of families with children aged 0-17.

The 45-minute telephone interview included questions about things that may have happened in a child's school, neighborhood, or home, and about how the child's health has been lately. Some of the questions involved sensitive issues, such as whether the child has ever experienced violence and whether the child has ever experienced unwanted sexual advances.

A national sample of 4,500 interviews was conducted with families with children 0-17 years old, 2,500 with parents of children age 0-9 and 2,000 with adolescents age 10-17. If the child was 0-9 the interview was conducted with the parent. If the child was 10-17, a short interview was conducted with the parent and then permission was requested to conduct the remainder of the interview with the 10-17 year old. Callbacks were scheduled to reach the children if there was permission to interview them but they were unable to conduct the interview at the time of the parent interview. If parental permission to interview the 10-17 year old was refused, the child was not recontacted.

Because the sample was drawn at random it was impossible to send an advance letter. However, a letter about the project from the University of New Hampshire was sent to any parent or child who wanted more information about the study before they participated. This letter explained the purpose of the study, assured confidentiality, emphasized the voluntary nature of participation, and otherwise conformed to standards for the protection of human subjects.

The interview was completely confidential. Name and address information was collected to send a $20 check as a token of appreciation for completing the survey. This information was not used for any other purpose.

The survey was conducted in either English or Spanish and the average time for a completed interview was 45.4 minutes.

A follow-up interview is planned in the next 2-3 years. At the end of the interview, respondents were asked if they would be willing to participate in the follow-up. Respondents who said no will not be recontacted.

SAMPLING PROCEDURES

SAMPLE CONSTRUCTION

The basic element in the sample design was the construction of a nationwide sample frame of residential telephone numbers from which a sample of telephone households could be drawn by random digit dialing (RDD). This cross-section yielded 3,000 of the 4,500 completed interviews.

In an effort to ensure that the study included a sizeable proportion of minorities (African Americans, Hispanics and Low-income households), Abt SRBI also employed an over-sample of telephone exchanges that had a population of 70% or more of that population. Random digit dialing (RDD) was also employed with this second sample. This second sample yielded 1,500 of the completed interviews.

In an effort to more accurately reflect total estimates of the national population of families with children, sample weights were generated to correct for disproportionate sampling procedures.

Random Digit Dialing Samples for Telephone Surveys

The use of RDD sampling for telephone surveys was developed in the 1960's as an improvement over existing procedures of sampling from telephone directories. The problem with the use of telephone directories is that a substantial number of telephone households are not represented in these directories because of either unlisted, unpublished numbers, or new listings; while many listed numbers are outdated by the time the directory is used as a sampling frame. It is estimated that approximately 30% of telephone households have unlisted numbers. Furthermore, these households have very distinctive income and racial characteristics, as well as geographic coverage. Consequently, the use of a selection procedure that is restricted to persons and households listed in telephone directories will produce a biased sample of telephone households. The random digit approach was designed to avoid this problem by introducing a randomization process in the selection of telephone numbers to be sampled so that households with unlisted numbers would have an equal probability of selection to households with listed numbers.

There are, however, a variety of approaches to RDD sampling. To understand these approaches it is first necessary to review some basics. The telephone numbers in the United States have three parts -- a three digit area code, a three-digit NNX code (often inaccurately described as a central office code), and a four digit telephone number. A strict random sampling approach would require the randomization of the full ten digit number. This approach is problematic since only 103 of the possible 999 area code numbers are currently assigned in the United States. In addition, only about a third of the possible three digit NNX codes within these area codes are actually working NNX exchanges. A compilation of all working and unduplicated NNX exchanges in the United States reported only 27,981 out of 999,999 possible combinations of the three digit area code and three digit NNX code. Consequently, a true randomization of the ten digit number would produce a working NNX number in only one of fifty cases.

Since the likelihood of reaching a NNX exchange -- much less say a residential household -- is only one in fifty using a strict RDD procedure, it is not surprising that this

approach is never used. Indeed, in one of the seminal articles on RDD, Glasser and Metzger explicitly describe random digit dialing as a sampling method "in which at least some digits of each sample telephone number are generated randomly." Specifically, all random digit sampling methods begin with the active area codes and NNX combinations appropriate to their sampling frame. They then proceed to sample and randomize from the remaining four digit telephone numbers.

A strict random sampling approach, based on the exclusion of non-assigned area codes and non-working NNX exchanges, would involve a total listing of working area codes and NNX exchanges within area codes, with all possible combinations of the four digit telephone number appended to each of these 27,000 base numbers. A random sample of telephone numbers could then be selected from the approximately 270,000,000 combinations. Since there are 105 million households in the United States, we would expect this method to yield a residential telephone in about one out of three attempts. The actual experience of numerous researchers indicates that the procedure actually yields a residential number in approximately one out of five attempts.

In 1978, Joseph Waksberg proposed an alternative method for RDD sampling, which would improve the efficiency of the sampling without sacrificing the probabilistic nature of the sample. The Waksberg procedure involves the construction of a sampling frame of the working area code and NNX numbers with all possible combinations of the first two digits of the four digit telephone number. A random selection is then made from the sampling frame of eight digit prefixes. For those eight digit numbers selected, a second random selection from all possible final two digits is made. The ten digit telephone number selected in this fashion is treated as a primary sampling unit (PSU).

The Waksberg method is a cluster sampling approach in which a preset cluster size within primary sampling units determines the number of qualifying PSUs selected. In order to qualify as a PSU, the randomly selected ten digit telephone number must yield a working residential number. If the sampled number does not yield a working residential number, it is rejected and another PSU is drawn in its place. This procedure continues until the desired number of PSUs is obtained. Within the qualifying PSUs, the number of telephone numbers equal to specified cluster size is made by randomly selecting those numbers from all possible combinations of the last two digits of the stem PSU number.

The Waksberg RDD method improves the efficiency of RDD telephone sampling, compared to strict random sampling of all numbers within working area and office stem numbers, quite considerably. In an empirical comparison of the two methods, Groves demonstrated that in a national sample the number of working household numbers reached among the total numbers attempted increased from 21.6% under the random sample method to 65.8% under the Waksberg cluster sampling procedure. This improvement in sampling efficiency, using a probability based sampling design, is the reason for the popularity of the Waksberg approach to RDD sampling.

There is, however, one clear drawback to the Waksberg procedure. The Waksberg RDD method is a cluster sampling procedure. Virtually any cluster design among a non-uniform population would be expected to undergo some loss of precision in relation to a simple random sample or a stratified random sample if there is any tendency toward homogeneity of characteristics of individuals selected from the same cluster. One of the advantages of the Waksberg method in the screening for rare populations is that its procedures enhance the location of rare populations in non-zero clusters. This property,

however, grows out of the non-uniform geographic distribution of the American population by age, race, income, family status, as well as other characteristics, and the geographic clustering represented by Waksberg's primary clusters.

Consequently, a design effect should be anticipated for population studies which utilize the Waksberg RDD sampling method. Groves estimated the design effect of the Waksberg method, compared to a systematic random sample, for a series of demographic and attitudinal characteristics. It should be noted that the design effect of a cluster sample does not necessarily exceed that of an element sample in all cases. However, the average (mean) square root of the design effect across thirteen variables for the cluster sample (1.30) exceeded the design effect for the element sample (1.05) by nearly 25%. In the case of seven demographic variables, the design effect of the cluster sample exceeded that of the element sample by 36%. The design effects are most apparent in race and urbanization, which are geographically clustered. Based on these estimates, Groves calculates that 1.37n interviews would be required from a cluster sample using the Waksberg technique to achieve the same sampling precision as a stratified element sample of size "n".

Given the average observed design effects between a stratified random sample and a Waksberg clustered sample, Groves calculated the relative cost efficiency of the two methods in achieving the same level of sampling precision. This represents the tradeoff between the cost of screening nonworking household numbers under an element sample and the cost of interviewing additional households to compensate for design effects under the Waksberg method. Groves reported that when the cost of processing eligible numbers is five times that of processing ineligible numbers, the maximum cluster size for cost savings is 6.5 interviews. Unfortunately, in a long interview with a predesignated member of the household, the cost of completing the average working number may be 20-30 times the cost of eliminating the average non-working number. In surveys, such as those anticipated in the Statement of Work, the Groves data suggests that it may not be possible to achieve equal precision at lower cost from the clustered design. Certainly, if a cluster size of 6 completed interviews is drawn using the Waksberg method, the expected sampling variance will be considerably higher than it would be if the same size sample had been drawn as a random element sample.

The Waksberg method was developed to improve the efficiency of a simple element sample of all possible residential banks within assigned exchanges. An alternative approach that was developed at approximately the same time was to conduct an element sample of all banks with any listed numbers. This approach eliminates the empty banks that make a simple element sample of all possible banks so inefficient. It does introduce a potential problem of non-coverage for households living in banks with no listed numbers. This approach is described as the “truncated list-assisted” RDD method because it uses listed telephone numbers to identify hundreds banks with at least one assigned telephone number, but in doing so it eliminates telephone households located in banks with no listed telephone numbers.

However, these non-covered households are generally estimated to represent no more than one to two percent of all telephone households. Against this non-coverage bias, the second method avoids the statistical problems associated with a cluster sample. Research has demonstrated that both methods yield approximately the same efficiency for sampling working residential telephone numbers. ABT SRBI uses the second method of RDD sampling for general population surveys because a minimal level of non-coverage is a small tradeoff to avoid the effects of cluster sampling on sampling variances associated with the Waksberg method.

RDD Sampling Procedures

Once the sample has been geographically stratified with sample allocation proportionate to population distribution, a sample of assigned telephone banks will be randomly selected from an enumeration of the Working Residential Hundred Blocks within the active telephone exchanges within the strata. The Working Hundreds Blocks are defined as each block of 100 potential telephone numbers within an exchange that includes 1 or more residential listings.

In the third stage sample, a two digit number is randomly generated by computer for each Working Residential Hundreds Block selected in the second stage sample. This third stage sampling technique is known as RDD. Every telephone number within the Hundreds Block has an equal probability of selection, regardless of whether it is listed or unlisted.

The use of RDD sampling eliminates the otherwise serious problem of unlisted telephone numbers. Nationwide, approximately 20% of all phone subscribers have unlisted phones. Moreover, significant variation occurs among demographic groups, with the number of unlisted phones reaching a high of 26% in the West, 29% in large metropolitan areas, 25% among those earning $5,000 - $10,000, and 32% among non-whites. For these reasons, using published phone listings as the universe is inadequate for telephone surveys and inferior to using RDD.

The third stage RDD sample of telephone numbers is then dialed by Abt SRBI interviewers to determine which are currently working residential household telephone numbers. Non-working numbers and non-residential numbers are immediately replaced by other RDD numbers selected within the same stratum in the same fashion as the initial number. Ineligible households (e.g., no adult in the household, language barriers, etc.) are also immediately replaced. Non-answering numbers are not replaced until the research protocol (i.e., the number of callbacks) is exceeded. However, one or more open number per case may be permitted in order to permit the field period to be completed within a reasonable period.

QUESTIONNAIRE DESIGN, PRETESTING AND PROGRAMMING

Instrument Design

UNH staff developed the 45-minute telephone interview. Abt SRBI assisted with fine-tuning the instrument for this assessment, including making sure questions were asked in a way that makes sense to respondents; the question order and wording was non-biasing and maintained respondent interest; and the interview minimized respondent time and burden, while collecting information in an accurate and efficient manner.

This study was conducted by using computer-assisted telephone interviewing (CATI). In principle, CATI provides a number of benefits over traditional telephone interviewing, including a smoother flowing interview when the questionnaire contains interview branching to different questions series depending on the answer to previous questions, because the computer program moves the interviewer to the next appropriate question automatically. In addition, the use of CATI can help to minimize recording error because the acceptable range of responses can be programmed into the data entry program, which will not permit the interviewer to accidentally enter an out-of-range punch. Since the interviewer actually records each response to survey questions through the on-line data entry program, the risk of data processing errors arising from key punch errors is eliminated in CATI interviews.

The CATI system also provided some important quality control benefits. It automatically recorded the day and time of dialing; the number dialed; and the connect time in minutes. Since each interviewer had to sign on and off the system, this meant that the performance of each interviewer on the project, as well as the progress of the study overall, was monitored.

CATI Programming of Questionnaire

The Abt SRBI staff programmed the questionnaire for CATI administration. The hard copy questionnaire was programmed into the computer-assisted telephone interviewing system. The CATI program involved 1) sample entry and updating procedures; 2) question and response series; 3) skip patterns; 4) section and question rotation; 5) interviewer probes and instructions; 6) range checks; 7) consistency checks; and 8) special edit procedures.

The CATI program was developed by Abt SRBI's data processing staff. The program was reviewed by Abt SRBI's project manager for consistency of question wording, response categories, interviewer instructions and skip patterns with the UNH approved hard copy.

FIGURE 1
QUESTIONNAIRE INTRODUCTION WITH OVERSAMPLE SCREENING

Hello, I'm _____ from Abt SRBI calling on behalf of the University of New Hampshire. We are not selling anything. We are conducting a national survey on issues of children's safety in the United States. This is an important study that will give us a better understanding of the kinds of problems that children face and help us to better plan for the future needs of children and their families.
[IF NEEDED: "May I speak to an adult in the household?" Re-read introduction if a new person comes to the phone]

CON2. Are there any children between the ages of **1 month and 17 years old** living in this household, whether they are home now or not?

1 Yes
2 No [Thank and end interview. Screen out because no 0-17 year old child in house.]
3 Refused [END - Not Qualified]

IF SAMPLE TYPE=CROSS-SECTION, SKIP TO CON3
IF SAMPLE TYPE=OVERSAMPLE, CONTINUE WITH OS1

Low Income Oversample Intro. Script
OS1. Including yourself, other adults and any children, how many people live in your household?

Number of residents _____

[CATI INSTRUCTION: USING THE NUMBER OF HOUSEHOLD RESIDENTS IN QUESTION ONE, SUBSTITUTE THE APPROPRIATE FOLLOWING VALUES IN QUESTIONS 2a AND 2b.

		LSES Amount (150% 2008 FED POV LEVEL)
1 HOUSEHOLD RESIDENT	***-***	***$15,6001***
2 HOUSEHOLD RESIDENTS	***-***	***$21,000***
3 HOUSEHOLD RESIDENTS	***-***	***$26,400***
4 HOUSEHOLD RESIDENTS	***-***	***$31,800***
5 HOUSEHOLD RESIDENTS	***-***	***$37,200***
6 HOUSEHOLD RESIDENTS	***-***	***$42,600***
7 HOUSEHOLD RESIDENTS	***-***	***$48,000***
8 HOUSEHOLD RESIDENTS	***-***	***$53,400***
9 HOUSEHOLD RESIDENTS	***-***	***$58,800***
10 HOUSEHOLD RESIDENTS	***-***	***$69,600***

1 Values derived as 150% of 2008 HHS Poverty Guidelines for the 48 contiguous states

OS2. To be sure we are representing the opinions of all groups, would you please tell me if your TOTAL household income in 2007 was ***MORE THAN*** *[SUBSTITUTE LSES Amount BASED ON HOUSEHOLD SIZE]?*
(IF REFUSED OR DON'T KNOW, REASSURE R OF CONFIDENTIALITY AND EXPLAIN THAT INFORMATION WILL BE USED ONLY TO COMPARE THE PROBLEMS AND RESOURCES AVAILABLE TO PEOPLE IN DIFFERENT INCOME GROUPS. IF DON'T KNOW, PROBE FOR R'S BEST GUESS.)

Yes, more 1
No, not more 2
Don't know 8
Refused 9

Hispanic/African American Oversample Intro Script

OS3. To be sure we are representing the opinions of all groups, would you please tell me if you consider yourself to be Hispanic, Spanish or Latino?

Yes 1
No 2
Don't know 8
Refused 9

OS4. Do you consider yourself to be African-American?

Yes 1
No 2
Don't know 8
Refused 9

IF (OS2=YES, ns or ref) AND (OS2=NO, NS, or REF) AND (OS3=NO, NS, or REF) Thank and End; S/O not low income, HSL or AA
Screen out: *Thank you very much for you help. That is all of our questions. Have nice evening.*

Can be more than one type:

Dummy: LOW INCOME (OS2=NO).....1	*Quota Low-Income=500*
Dummy: HISPANIC SPAN ISH LATINO (OS3=YES).....1	*Quota HSL=500*
Dummy: African American (OS4=YES).....1	*Quota AfAm=500*

IF (OS2=NO, OS3=YES OR OS4=YES), CONTINUE WITH CON3.
CON3. We need to speak to the parent or guardian living in the household who is likely to be *most* familiar with the everyday activities of the child/children. May I speak to that person?

1 Speaking [GO TO CONSENT6]
2. New person comes to phone [GO TO INTRO BEFORE CONSENT6]
3 Not here [SCHEDULE CALLBACK AND ASK FOR FIRST NAME]
4 Refused [GO TO CONSENT4] QUAL LEVEL 1

CON4. Could I send you a letter explaining the study?

1 Yes [CODE DISPOSITION AS WANTING LETTER AND SET CALLBACK FOR 7 DAYS]

2 NO [GO TO CONSENT5]
4 Refused [GO TO CONSENT5]

CON5. Would you please tell me why you do not want to participate?

_____

9 Refusal [END - QUALIFIED]

INTERVIEWER SELECTION, TRAINING AND MONITORING

After finalization of the instrument, questionnaires were then printed in sufficient quantities for the training session. The training session for telephone interviewers for the survey was held on November 26, 2007. The field period for the survey commenced immediately following training.

The general procedures followed by interviewers in conducting the survey data collection are described below.

Abt SRBI Interviewers

All interviewers who work for Abt SRBI are thoroughly trained and closely supervised. Special training sessions are undertaken for each new project to help ensure quality control over the collection of survey data. All new interviewers are thoroughly screened, their references checked and their interviewing abilities tested before being hired as an Abt SRBI telephone interviewer. New interviewers receive extensive instruction in the methods and procedures which are expected at Abt SRBI before they ever perform a single interview. New Abt SRBI interviewers are monitored extremely closely during the first two weeks of their employment. Subsequent to this test period their performance is monitored regularly, as are all of Abt SRBI's interviewers, twice per shift.

Many of Abt SRBI's telephone interviewers bring to their work a tremendous ability to repeat survey items flawlessly and with an enthusiasm that does not convey the repetitiveness of the task at hand. Abt SRBI's location and reputation as a constant employer as well as the flexibility of scheduling telephone interviewers makes it a prime resource for this uniquely gifted group of telephone interviewers.

The quality of the interviewing staff used on a survey is one of the most important factors affecting the validity, reliability and timeliness of the data collected. Hence, special care was taken in the identification and selection of the most appropriate interviewing staff for this study.

This project required that the contractor have the special capability to conduct surveys with high response rates among women on sensitive subjects. The ability to conduct interviews on sensitive subjects is one of the hallmarks of the Abt SRBI organization. All aspects of interviewer recruitment, scheduling and training were directed by the administrative staff of the telephone research center. The telephone administrative staff directed operations according to the specifications of the project director and analytic staff. The administrative staff maintained detailed records throughout the field process so that the progress of the survey could be monitored by the project director and documented for the client.

Because of the sensitive nature of this study, only experienced female interviewers were used to conduct this study with respondents.

In addition, interviewers who had successfully conducted earlier Abt SRBI sensitive surveys were assigned to this project. These interviewers have already demonstrated their ability to ask sensitive questions.

Spanish Language Interviews

A Spanish language version of the NATSCEV survey instrument was developed in order to eliminate language barriers for a small proportion of the U.S. adult population. The questionnaire was translated into Spanish by a UNH professionals.

If the interviewer encountered a language barrier at the telephone number, either with the person answering the phone or with the designated respondent, the interviewer thanked the person and terminated the call. If the case was designated as Spanish language, it was turned over to the next available Spanish-speaking interviewer.

All households in which a language barrier (Spanish) was encountered were assigned to a Spanish-speaking interviewer. These bilingual interviewers re-contacted the Spanish-speaking households to screen for eligibility and conduct interviews with eligible respondents.

Training Session

At the beginning of the study, all assigned field staff participated in a project training session. Training was divided into two segments. The first phase of training required review of the general principles of survey research and interviewing. The second phase of training dealt specifically with the requirements of the study at hand. Operationally, both sets of information were covered simultaneously in training sessions. In these sessions the specific requirements of the study to be performed were used to breathe life into and demonstrate the general principles of survey research.

All interviewers followed a general manual on interviewing procedures developed by Abt SRBI operations staff. The areas which were considered important in the general background training of interviewers, regardless of the specific project, included:

- an understanding of sampling procedures and the importance of rigorous adherence to sampling procedures in the field;
- an understanding of respondent selection procedures and the importance of following these procedures rigorously;
- the role of the interviewer in the survey process;
- recommended methods for contacting potential respondents and procedures for setting appointments;
- effective methods for gaining initial agreement to be interviewed;
- methods for overcoming initial reluctance to schedule or agree to be interviewed;
- interviewer behavior in the interview setting -- how to be courteous, neutral and nonintrusive;
- how to avoid biasing responses by verbal and nonverbal cues;
- how to ask and record close-ended questions;
- how to probe and record open-ended questions;
- how to control irrelevancies and digressions without offending the respondent;
- how to reassure respondents about the confidentiality of the information collected and the anonymity of survey respondents;
- the general standards of completion, comprehensibility and legibility required for recording;

- general recording conventions; and
- field reporting standards.

The project director developed the training manual. Additional training materials included item-by-item interviewing specifications; procedures to maximize the probability of obtaining sensitive information from respondents; proper CATI recording procedures; and additional reporting and quality control requirements for this effort.

Training sessions not only allowed the review of general interview principles and unique study procedures and requirements but also enabled the use of the CATI equipment, both to gain familiarity with the survey instrument and to conduct interviews.

On this survey, the most critical issue in training was to ensure that the questions were asked properly and responses were recorded properly. Consequently, much of the training period was devoted to question-by-question specifications for the interview. The remaining time was spent in reviews of initial contact and screening procedures, call-back protocol, sample record-keeping and other administrative matters.

After the first formal training session, interviewer performance was monitored and individual instructions were provided.

Monitoring of Telephone Interviewers

Abt SRBI draws upon a staff of experienced telephone supervisors for its projects. All supervisors participated in the project training session. In addition, they underwent an additional review on interview editing instructions, refusal prevention and conversion and study issues.

Two types of supervisors were utilized in Abt SRBI telephone surveys: shift supervisors and monitors. A shift supervisor was on duty each of the 14 weekly shifts. They were responsible for quality control, maintaining production rates and supervising the monitors. In addition, Abt SRBI normally uses one monitor for every 10 to 12 interviewers.

Each interviewer was silently monitored by a line monitor at least twice each interviewing shift. The monitor evaluated the interviewer on her performance. The monitor discussed any problems an interviewer was having with the shift supervisor. Before the end of the interview shift the monitor and/or shift supervisor discussed the evaluation with the interviewer. If the interviewer could not meet Abt SRBI standards, she was dropped.

On this study we monitored 10% of each interviewer's work. The actual selection of cases to be monitored for a given interviewer was random, unless there was reason to believe a problem existed. Then, very intense monitoring was implemented until the problem was resolved. Interviewers are never aware if or when they are being monitored, so that their performance is neither positively nor adversely affected by the monitoring.

Interviewers are routinely evaluated in terms of the following criteria:

1. Professional and courteous telephone manner;
2. Voice clarity;
3. Reading questionnaire verbatim;
4. Non-biasing through inflection or voice tone;
5. Remaining neutral to respondent's comments;
6. Using approved techniques of probing and recording open-ended responses;
7. All areas of hourly productivity, including down time, refusal rates, etc.

All interviewers on the project, like all other Abt SRBI projects, were monitored in two ways. The study monitor sits at a monitor station where she can see what the interviewer has recorded, while audio-monitoring the interview. The audio-monitoring allows the supervisor to determine the quality of the interviewer's performance in terms of:

1. Initial contact and recruitment procedures;
2. Reading the questions, fully and completely, as written;
3. Reading response categories, fully and completely, (or not reading them) according to study specifications;
4. Whether or not open-ended questions are properly probed;
5. Whether or not ambiguous or confused responses are clarified;
6. How well questions from the respondent are handled without alienating the respondent or biasing her response;
7. Avoiding bias by either comments or vocal inflection;
8. Ability to persuade wavering, disinterested or hostile respondents to continue the interview; and
9. General professional conduct throughout the interview.

The supervisor also monitors the interviewer's recording of survey responses on the monitor. The supervisor's monitor station emulates the interviewer's station. Consequently, the supervisor can see whether the interviewer enters the correct code, number or verbatim, in response to the answer. The interviewer was rated by the supervisor on the accuracy of key-entry of interview responses, as well as interviewing skills.

In addition to the interview monitoring twice per shift, each interviewer is also given an in-depth evaluation on a regular basis. For the in-depth review, the supervisor monitors the total performance of the interviewer.

CONDUCT OF INTERVIEWS

The primary task of this survey was to conduct a uniform and systematic data collection effort among a representative sample of the target population. To this end, Abt SRBI has assembled a management, operations and interviewing staff with an extremely broad background in survey research. This, coupled with Abt SRBI's support services for supervising quality control and one of the most exceptional analytic staffs in the country, gives Abt SRBI an unusual ability to provide high quality data collection services in a cost-efficient manner.

This telephone survey was conducted from the firm's telephone research facilities in New York City and Huntington, West Virginia. The Abt SRBI telephone research centers are fully monitored telephone facilities with central line switching. The firm has over 135 interviewing positions in its telephone centers used for NATSCEV, all equipped for computer-assisted telephone interviewing, manned by a corps of over 250 highly skilled executive and household interviewers. These interviewers are overseen by an experienced staff of telephone field supervisors.

The interviewing functions of the Abt SRBI organization are supported by a sampling staff, a production staff, a coding staff, and a data processing staff, as well as a design and analysis staff. Virtually all major phases of the research process are conducted in-house at Abt SRBI. This assures strict accountability, quality control, fast turnaround and competitive pricing.

The quality and experience of the Abt SRBI research and operations staff have been tested in many difficult and important surveys for public and private clients. With its trained interviewing staff, professional supervisory staff, and skilled support staff, Abt SRBI consistently exceeds industry standards for quality research.

Sample Assignment

The random telephone numbers sampled for the UNH Survey interviews were assigned to interviewers automatically using the CATI system. Once interviewers had passed over the message screen, the computer asked them whether they wish to conduct an interview or locate a callback by a named respondent. The system then provided the phone number and its current disposition (e.g. First Attempt). Interviewers press enter to advance to the OPENING SCREEN which provided information on the sampled case. Interviewers check to make sure the day and time correspond with the "best days to call" and "best times to call" listed for the respondent. If it was not an appropriate day or time to call, interviewers advanced to the next case. If it was a good day and time to call (or no day or time was shown on the screen), interviewers dialed the number for the primary respondent.

Initial Contact

Initial telephone contact was attempted during the hours of the day and days of the week which had the greatest probability of respondent contact. This means the primary interviewing period was conducted between 5:30 p.m. and 10:00 p.m. on weekdays; between 9:00 a.m. and 10:00 p.m. on Saturdays; and between 10:00 a.m. and 10:00 p.m. on Sundays.

If the interview could not be conducted at the time of initial contact, the interviewer rescheduled the interview at a time convenient to the respondent. Although interviews were primarily conducted on evenings and weekends, daytime interviews were scheduled when necessary. If four telephone contacts on the night and weekend shifts did not elicit a respondent contact, the fifth contact was attempted on a weekday.

The Abt SRBI telephone research center is fully staffed during the five daytime shifts on weekdays, five nighttime shifts on weekdays and the four weekend shifts. Hence, we can reach respondents at any time convenient to them.

Interviewers attempt a minimum of five calls to each telephone number. When the household was reached, the interviewer asked to speak to the designated respondent. If the respondent was reached, but an interview at that time was inconvenient or inappropriate, interviewers set up appointments with respondents. If contact was made with the household, but not the designated respondent(s), interviewers probed for appropriate callback times and attempted to set up an appointment.

The CATI system recorded all telephone field work associated with a particular case in its sample management system. These records included the date and time of every attempt and contact; the outcome of each contact attempt; and the date the interview was actually conducted or the reason it was not. The CATI sample management system provides accurate detail on all attempts. These outcomes included answering machines, language barriers (and the language, if identifiable), as well as other survey outcomes. This information helped the study team to understand any problems with the sample availability. The CATI system assigned cases to each interviewer on a random basis each shift. Therefore, many interviewers may have worked on a single case at different times. When an interviewer obtained a completed interview, or encountered a refusal, termination, some form of survey ineligibility or any other outcome, he or she recorded the outcome on the CATI system. At the end of each shift, a CATI management record was printed out and reviewed by the shift supervisors. The shift supervisors reviewed the status of each case in the sample. The CATI system removed from active-status all completed interviews, and "dead" cases were removed from field and sent to the sampling department for appropriate action.

Completed interviews were logged into the daily record of completed interviews and sent to the coding department for post-field editing. Refusals or terminations were reported to the field manager with the reason for refusal. These cases were held aside for conversion efforts at the appropriate time.

No Answer and Busy Outcomes

Interviewers made five attempts to ring unanswered telephones on different days and at different times, over a period of at least three weeks, in order to obtain the highest possible response rate. Numbers where busy signals were encountered were re-dialed 15 minutes after the initial contact attempt. Cases were classified as final "No answer" only after five or more unsuccessful attempts.

If the telephone contact produced a "number has been changed" recording, interviewers entered the new telephone number into the CATI system. If the interviewer was told the number dialed was "No longer in service" or "Disconnected", these outcomes were recorded.

Scheduling Call backs for Completion

If the respondent was reached at the time of initial contact, but was, for some reason, unable to finish the interview, the interviewer asked the respondent when would be a convenient time for them to complete the interview. This date and time was recorded in the CATI system, which automatically scheduled callbacks.

Although most interviews were attempted on weekdays, evening and weekends interviews were scheduled if the designated respondent was not otherwise available or if the respondent preferred to be interviewed during the evening or on the weekend.

If the respondent hesitated to provide a day and time, the interviewer made a suggestion, such as, "What about tomorrow evening?" If the respondent agreed with the general time frame, then the interviewer probed for the specific appointment. For example, "Would around 7:00 p.m. be all right?" Interviewers were careful when entering the time to always indicate whether it was AM or PM. Comments on the callback for the next interviewer could include the respondent's statement that, "they will try to be available at 7:00 p.m., but they might be home late because of a meeting -- so keep trying." This helped the next interviewer know how to treat the case if the callback failed. Comments could also tell the next interviewer what not to do. For example, "Don't ever call me from 5:30 p.m. to 6:30 p.m. We eat dinner then, and do not want to be disturbed."

When the Respondent Was Unavailable

If the designated respondent was "temporarily" unable to be interviewed -- that is, out of the country, on vacation or a business trip or temporarily incapacitated -- interviewers entered the sample disposition onto the sample card. To the extent that it was appropriate under the circumstances, interviewers tried to find out when the respondent was likely to be available. The interviewing staff used the information to schedule the recontact. If no information could be obtained, the respondent was simply recontacted after a reasonable period.

If interviewers were told the respondent would be permanently unavailable for the duration of the study -- e.g., out of the country for the year -- they recorded the reason in the comments screen. The case was then moved to "dead" sample status.

Conducting the Interview

The initial contact with the household and the designated respondent is crucial to the success of the project. Most refusals take place before the interviewer has even completed the survey introduction. Numerous studies have shown that an interviewer's approach at the time of the first contact is the single most important factor in convincing a respondent to participate in a survey. Many respondents react more to the interviewer and the rapport that is established between them than to the subject of the interview or the questions asked. This positive first impression of the interviewer is a key to securing the interview.

In the initial telephone contact, the interviewer immediately established the following:

- A positive impression that he or she was a friendly, responsive professional person;

- The purpose of the interview, especially any ways in which the survey was important to the respondent; and,
- What was expected of the respondent -- whether opinion or factual information was required, and the length of the interview.

The survey introduction included the following:

- The interviewer's name;
- Who they were calling for (the University of New Hampshire);
- What they were doing (conducting a national survey on youth safety); and
- What they wanted (to ask the respondent some questions about their experiences and opinions).

Answering Questions and Objections

While the brief introduction to the study concerning its sponsorship, purpose and conditions was sufficient for many respondents, some had questions and concerns. All respondent questions were answered clearly and simply.

The most common questions and objections from respondents were:

a. “What is the survey about?”

b. “Who is going to see this information?”

c. “How long will this take?”

d. “I'm too busy!”

e. “Why was I chosen?”

f. “I don't know anything about that!”

Interviewers were trained to answer these and similar questions. It was important that they appear knowledgeable and honest. At the same time, it was important that they not prompt or bias respondents with any answers. Most importantly, interviewers had to appear willing to answer all questions in an open, positive and confident manner, so that respondents were convinced of the value and legitimacy of the study. If respondents appeared reluctant or uncertain, Abt SRBI's toll-free number was provided to verify the authenticity of the survey.

General Interviewing Rules

All interviewers were required to adhere strictly to the following rules in all instances:

1. Ask all questions exactly as they are written.
2. Ask the questions in the order in which they appear in the questionnaire.
3. Ask EVERY question specified in the questionnaire; unless an instruction tells you to do so, do not skip any questions.
4. Don't offer any explanations or interpretations unless specifically instructed to do so.

5. Don't suggest answers; help your respondent to answer within the categories -- do not even imply which category he/she should pick.

6. Don't paraphrase or interpret a respondent's answer -- probe to get the respondent to clarify what he/she means.

7. Be careful to avoid giving any clues that might affect a respondent's answers. Be neutral while still maintaining a friendly, professional rapport with a respondent.

Probing

A response was probed whenever a respondent appeared to miss the point of a question, misunderstood a question or gave an incomplete or unclear answer. Probing was designed to help the respondent focus on the meaning of the question. Probes took the form of neutral, non-directive statements. The following types of probes were used:

a. “Please be more specific.”

b. “Tell me more about that.”

c. “I'd like to know (or talk) more about that.”

d. “Think about it for a minute.”

e. “What do you mean by _____?”

f. “What are some other reasons?”

g. “Which comes closer (closest) to the way you feel?”

h. “If you had to choose_____?”

i. “Why is that _____?”

j. “In what ways _____?”

k. “Which one do you use most?”

Some respondent replies were repeated after a respondent had finished speaking so that the respondent heard the answer in the context of the question -- giving a chance to clarify or amend the answer.

RESPONSE RATES

Response rates are a critical issue in any sample survey because they may indicate a serious source of non-sampling error. Although the initial sample is drawn according to systematic and unbiased procedures, the achieved sample is determined by the proportion of the drawn sample who agree to participate. To the extent that those who agree to participate are different from those who refuse to participate, the achieved sample will differ from the population it represents. In order to minimize such bias, surveys attempt to achieve the highest response rate possible -- given the tradeoffs between survey objective, level of effort and timing.

There are a number of factors under the control of the contractor which can affect response rate. Contact procedures and introduction determine the ability to reach the designated respondent and capture her imagination. Questionnaire layout and wording improves survey flow and limits terminations. Interviewer quality and training improves the interpersonal interaction needed to achieve and maintain cooperation throughout the interview. These factors may differ from firm to firm but remain fairly constant from survey to survey within the firm.

Abt SRBI Inc. has a distinguished reputation for achieving the highest possible response rates on large-scale surveys using strict survey methodology.

Interview Termination

Occasionally interviews were broken off in the middle. A "terminated" interview was one in which the respondent began answering questions, but then decided that he or she would not finish the interview. (A refusal occurred when the targeted respondent refused to answer even the first survey question.) There were also "callback to completes" when something unexpected came up and the respondent said he or she would finish the interview at another time. Moreover, there were times when the calls were cut off.

When any of these things happened during an interview, interviewers entered "H" in the answer category. This brought up the HALT MENU. If the respondent had terminated the interview, "T" was entered, indicating a terminated interview. If the respondent could not finish at that time and wanted a callback later, "callback requested" was recorded on the sample card with the date and time preferred. If the call was accidentally cut off, interviewers called back the respondent immediately. If they were reached, the interview was resumed at the last question. The CATI system saved interviews that were broken off so that a callback to complete or termination conversion could be made.

Refusals

Some respondents refused to answer even the first survey question and were thus, classified as "refusals." When a refusal occurred, interviewers asked the respondent why he/she refused to be interviewed and recorded the response on the sample card. Interviewers also recorded any relevant information, such as the circumstances surrounding the refusal. These were reviewed by the research team. Interviewers noted any problems with the contact

script, questionnaire or interviewing procedures they believed contributed to non-participation (this included any comments made by the respondent). Both the Project Director and the Operations Manager analyzed the data on refusal rates, refusal distributions and other information on the characteristics of refusals on an ongoing basis. Each interviewer was instructed to keep an extremely accurate record of each refusal. They were to document the reason for refusal, if given; the exact point of refusal; whether the refusal was given by a woman or a man; and any other comments that clarify the reason for non-interview.

Maximizing Response Rates

In order to attain the highest possible response rate, an interviewing strategy with the following major components was followed:

1) Careful development and refinement of the initial contact script. Most refusals occur within the first minute of contact. The first two or three sentences in the survey introduction may have a dramatic effect on response rate. This included:
   a) Identifying the sponsor as University of New Hampshire
   b) Explaining the social utility (not in those words) of the survey;
   c) Explaining why we need the information and how it will be used;
   d) Assuring them that they would not have to answer any questions that they do not want to.
2) Assignment of all cases to a group of thoroughly trained and experienced interviewers, highly motivated and carefully monitored and controlled by Abt SRBI's field staff.
3) Special training for all interviewers on how to overcome initial reluctance, disinterest or hostility during the contact phase of the interview.
4) A long field period which permitted us to eventually interview respondents who are temporarily out of town, as well as time to overcome the resistance of passive refusals and convert active refusals and terminations.
5) A ten-call (initial attempt and nine Call backs) contact strategy, conducted according to an algorithm designed for maximum probability of contact.
6) Up to twenty-five callbacks once a case is reached, until the case reaches final disposition, or the field period ends.
7) The maintenance and regular review of field outcome data in a sample reporting file, derived from both the sample control and CATI files, so that patterns and problems in both response rate and production rates can be detected and analyzed.
8) Weekly meetings of the interviewing and field supervisory staff with the study management staff to discuss problems with contact and interviewing procedures and to share methods of successful persuasion and conversion.

FIELD OUTCOMES

The goal of this study was to collect accurate information about problems facing children today. This was achieved by collecting the opinions and experiences of a random sample of about 2,500 parents of children age 0-9 and 2,000 children age 10-17. The survey was conducted in either English or Spanish. A highly structured telephone interview was used to elicit the reported experiences of the sample.

There were three simple steps which reduced interviewer variability in NATSCEV. First, a highly structured interview format with very explicit interviewer instructions was developed. Second, interviewers were instructed that they were only permitted to read the questionnaire script and that they were not permitted to say anything else. Indeed, word emphasis was indicated by underlining, and the number and manner of probes was indicated on the questionnaire. Finally, only interviewers who could read a script in an intelligent and interesting manner, time after time, without shifting intonation or inflection, were assigned to the project. In short, we created a very tight script, used experienced professional interviewers to read the script and showed them exactly how it was to be done.

Abt SRBI went to special lengths to reach respondents and complete interviews. We held interviewer training in Abt SRBI's office, which included detailed instruction on administering the questionnaire and supervised attempts to complete a questionnaire using the CATI program.

These procedures were largely successful in increasing the number of respondents who were contacted and agreed to be interviewed.

Field Period

Sample assignments were given to the interviewers on November 26, 2007 after training. The field period was closed on July 13, 2008. A total of 4,549 interviews were conducted, 2,455 with parents of children age 0-9 and 2,094 with adolescents age 10-17.

Interview Length

The interview start and end times were recorded for all interviews. Average interview length was 45.4 minutes.

Spanish Interviews

The interview was conducted in English or Spanish. Of the 4,549 completes, 279 of the interviews with the parents were done in Spanish. Nearly all of the adolescents age 10-17 wanted to do the remainder of the interview in English.

Response Rate

Response rates are a critical issue in sample surveys because they may indicate a source of non-sampling error. Although the initial sample was drawn according to systematic and unbiased procedures, the achieved sample is determined by the proportion of the drawn sample who are reached and who are able and willing to participate in the study. To the extent that those who are reached and those who are willing to participate are different from those who are not reached or unwilling to participate, the achieved sample will differ from the population from which it is drawn.

The cooperation rate represents one of the most critical measures of potential sample bias because it indicates the degree of self-selection by potential respondents into or out of the survey. The cooperation rate is calculated as the number of completed interviews, including those that screen out as ineligible, divided by the total number of completed interviews, terminated interviews, and refusals to interview. It should be noted that the inclusion of screen outs in the numerator and denominator is mathematically equivalent to discounting the refusals by the estimated rate of ineligibility among refusals.

Response Rate for Cross-section

A total of 170,058 randomly selected telephone numbers were sampled:

- 54% of the numbers were not active residential phone numbers, including 42% not-in-service, 6% business or government, and 5% computer or fax tones;
- 19% of the RDD numbers yielded households that were ineligible because there was no child age 0-17 in household;
- Only a relatively small proportion of the numbers yielded non-interviewable cases because they were non-English/non-Spanish speaking or the designated respondent was incapacitated (less than 1%);
- In addition, a small proportion of the drawn numbers were not reached or the designated respondent in the household could not be reached during the limited field period. This includes 9% classified as no answer and 2% in callback status at the end of the field period.

The response rate for the survey is based on the following elements:

- Completed interviews;
- Partial interviews;
- Screen outs- someone in the household completed the household screen, but no one in the household was found to be eligible for the full interview;
- Refusals;
- Non-contacts.

The AAPOR response rate 3 for the cross-section was 54%. The AAPOR cooperation rate 3 for the cross-section was 71%.

FIGURE 2
DETAILED SAMPLE DISPOSITION – National Cross-section

Interview	**Total**
Complete	3053
Screen-outs (no children in hh)	32324
Partials	666
Eligible, non-interview	
Terminate/breakoff	1309
Refusal, terminate	12388
Respondent never available	156
Answering machine-no message left	7570
Household-level language problem, non-Spanish	754
Physically or mentally unable	525
Unknown eligibility, non-interview	
Always busy	171
No answer	15557
Call blocking	34
Technical phone problems	38
No screener completed	3310

Not eligible	**Total**
Fax/data line	7968
Non-working/disconnect	74268
Business/govt./other org.	9837
Other	130
Total phone numbers used	170058
Completes and Screen-Outs	35377
Partials	666
Refusal and break off	14363
Non Contact	7726
Other	1279
Unknown household	15800
Unknown other	3310
Not Eligible	92203

Response, Refusal and Contact Rates[2]

Unknown Eligible Estimate[3] 0.39

Response Rate 1	0.45	Refusal Rate 1	0.18
Response Rate 2	0.46	Refusal Rate 2	0.21
Response Rate 3	**0.54**	Refusal Rate 3	0.23
Response Rate 4	0.55		
Cooperation Rate 1	0.69	Contact Rate 1	0.66
Cooperation Rate 2	0.71	Contact Rate 2	0.77
Cooperation Rate 3	**0.71**	Contact Rate 3	0.87
Cooperation Rate 4	0.73		

[1]Figures based on the American Association for Public Opinion Research (AAPOR) standard disposition definitions.
[2]See Appendix for explanation of how rates are computed.
[3]Estimated proportion of cases of unknown eligibility that are eligible.

Response Rate for Oversample of African-Americans, Hispanics and Low-Income Households

A total of 289,723 randomly selected telephone numbers were sampled:

- 61% of the numbers were not active residential phone numbers, including 49% not-in-service, 5% business or government, and 4% computer or fax tones;
- 12% of the RDD numbers yielded households that were ineligible because there was no child age 0-17 in household;
- Only a relatively small proportion of the numbers yielded non-interviewable cases because they were non-English/non-Spanish speaking or the designated respondent was incapacitated (less than 1%);
- In addition, a small proportion of the drawn numbers were not reached or the designated respondent in the household could not be reached during the limited field period. This includes 8% classified as no answer and 1% in callback status at the end of the field period.

The AAPOR response rate 3 for the oversample was 43%. The AAPOR cooperation rate 3 for the oversample was 63%.

FIGURE 3
DETAILED SAMPLE DISPOSITION – Oversample of Hispanic, African American and Low Income Families

Interview	**Total**
Complete	1496
Screen-outs (no children in hh)	35734
Partials	1858
Eligible, non-interview	
Terminate/breakoff	684
Refusal, terminate	19105
Respondent never available	225
Answering machine-no message left	13587
Household-level language problem, non-Spanish	828
Physically or mentally unable	831
Unknown eligibility, non-interview	
Always busy	11348
No answer	24168
Call blocking	36
Technical phone problems	18
No screener completed	3422

Not eligible	**Total**
Fax/data line	12737
Non-working/disconnect	149155
Business/govt./other org.	14215
Other	276
Total phone numbers used	289723
Completes and Screen-Outs	37230
Partials	1858
Refusal and break off	19789
Non Contact	13812
Other	1659
Unknown household	35570
Unknown other	3422
Not Eligible	176383

Response, Refusal and Contact Rates[2]

Unknown Eligible Estimate[3]	0.30		
Response Rate 1	0.33	Refusal Rate 1	0.18
Response Rate 2	0.35	Refusal Rate 2	0.23
Response Rate 3	0.43	Refusal Rate 3	0.27
Response Rate 4	0.46		
Cooperation Rate 1	0.62	Contact Rate 1	0.53
Cooperation Rate 2	0.65	Contact Rate 2	0.71
Cooperation Rate 3	0.63	Contact Rate 3	0.81
Cooperation Rate 4	0.66		

[1]Figures based on the American Association for Public Opinion Research (AAPOR) standard disposition definitions.
[2]See Appendix for explanation of how rates are computed.
[3]Estimated proportion of cases of unknown eligibility that are eligible.

DATA PREPARATION AND PROCESSING

All studies should begin with a self-conscious review of the study objectives, design and methodology. Most researchers recognize that carefully defining the problem to be investigated, preparing a thorough research design, constructing a meaningful questionnaire and drawing an appropriate sample are essential tasks which merit a great deal of care. However, many researchers devote all too little attention to the editing, coding and processing of the raw data collected by the interviewers during the field period of the survey. The tendency is unfortunate, because no matter how thorough the research design, how meaningful the questionnaire and how rich the responses collected by the interviewers in the field, the real success of any survey is ultimately dependent on how accurately the respondent's answers to the questions posed are captured during the interview and translated to a computer readable form from which the final tabulations are generated.

At each stage in the data collection, editing, coding and processing effort, the potential for substantial non-sampling error may enter the research process. If not carefully controlled, this form of error may overwhelm the most heroic efforts to minimize sampling error. We feel that even the best questionnaire and most sensitive interviewing can be rendered meaningless by the less than meticulous handling of the data during the editing and coding process. Hence, Abt SRBI takes great pains to minimize this sort of error by designing the data recording and processing as carefully as the sample design and data collection procedure.

Although the UNH Survey was conducted on Abt SRBI's CATI system on which data are effectively key-entered by interviewers and translated immediately to computer readable form, data was scrutinized at several points in the research process. Initially, each data element obtained in response to a close-ended query was checked as it was being recorded/key-entered to ensure that it conforms both to acceptable range requirements imposed on the item and that it was consistent with related items. Secondly, responses to open-ended items were recorded directly into the CATI data file into specific fields set up for the open-ended data. The open-ended replies were subsequently coded and key-entered into the CATI data base and edited on-line to ensure that the data conformed to existing case requirements (i.e., a punch exists indicating that the query to the open-ended item had been recorded).

Lastly, because CATI data base management and on-line edit feature were software-driven, the amount of on-line editing that can be accomplished, although quite substantial, was also finite. A final machine edit was performed on the data base. This data edit incorporated the specifications for on-line editing employed during the actual data collection as well as all additional edit and consistency checks required to ensure the final data base emerges in a pristine form.

When errors were detected they were resolved by visual inspection of the total CATI record for the case and any verbatim responses on paper. Corrections to the data base were made on-line so that any alteration of the data base that generates an inconsistency with extant data or was out of range was identified immediately. Reevaluation of the just initialed change ensued and the data base was corrected as appropriate. Before being pronounced as final, the entire data base was again subjected to a comprehensive machine edit.

The details of Abt SRBI's editing, coding and data processing procedures are outlined in the following pages.

Entering Responses

Each question in the interview was shown on the screen one at a time. Interviewers saw the question to be asked and the response categories that could be entered. The bottom of the screen told them if the question was a multi-response question (i.e., more than one response could be entered) or not. If it was a single response question, the computer moved to the next question as soon as the interviewer entered and verified a response. If the interviewer hit the wrong key, the computer allowed him/her to back up to the previous screen. The interviewer could correct the error by entering the valid code.

If more than one response needed to be changed after several subsequent questions had been answered, a line supervisor was called immediately so that the interview could be taken back to the appropriate point. However, if only one remote item was affected, interviewers took note of this response so it could be corrected after completion of the interview.

Most survey questions had pre-coded response categories on the screen. In some cases, interviewers read the categories to the survey respondent and he or she selected one of them. Interviewers then entered the code corresponding to the category selected by the respondent.

In other cases, interviewers were not supposed to read the response categories. For these questions, they had pre-coded categories on the screen that represented the most likely responses to the question. The interviewer entered the code(s) that most nearly corresponded to the respondent's answer. For other questions, interviewers entered a numerical response, such as the number of follow-up calls a patient receives.

Open-Ended Questions and Responses

The survey included several open-ended questions. In addition, there were "Other (SPECIFY)" response possibilities for several closed-ended questions. For open-ended questions and "Other (SPECIFY)" responses, interviewers recorded the respondent's answer, verbatim, on Study Action Forms (SAF's) during the interview. Because most interviewers can write faster than they can type, this prevented the interview from being delayed while the interview was typed into the system.

Each open-ended question required proper probing to ensure that the respondent's answer was complete and provided all of the necessary information for proper coding. When the interviewer had fully probed the response and was satisfied that he/she had obtained all of the necessary information, the interviewer entered the verification code for the question into the CATI system, which then advanced to the next question.

The same verbatim entry was made when the respondent's answer did not fit within any of the preassigned categories. There was an "Other - Specify" category for these questions. Interviewers entered the code for "Other" into the computer, and then recorded the verbatim response.

At the completion of the interview, the CATI system automatically brought up the verification code for each open-ended answer recorded. The responses recorded on the hard copy SAF were then entered by the interviewer into the CATI program.

Editing the Interview in the Field

Interviewers were required to edit their questionnaires immediately upon completion of the interview, while it was still fresh in their minds. Following the interviewer edit, a second edit was performed by the coding staff. Both edits emphasized completeness and comprehensibility.

Completeness. The interviewers made it a standard practice to edit completed surveys immediately upon completion of the interview. A respondent may have recalled an event germane to the interviewer's question and reported it only after his or her initial item response was recorded and several additional items were posed and answered. As a means of quality control over CATI data collection activities, interviewers were not permitted access to the survey data collected more than one item back. To do so required the intervention of a line supervisor. If the respondent's change of mind required a portion of the already administered survey to be performed again, the line supervisor was called over immediately and the interview schedule was backed up to the appropriate point. If the impact of the interviewee's change of mind was circumscribed, affecting only one remote item, the interviewer noted this response and the line supervisor was then free to correct the survey after completion of the interview. If the impact of the interviewee's change of response was immediate (i.e., the last question) the interviewer simply went back to the item and recorded the proper response.

Comprehensibility. At times, interviewers recorded responses that seemed perfectly comprehensible to them, but were not clear or understandable to someone who was not present during the interview. Thus, the project director stressed the need to make sure that appropriate contextual material was included in entering verbatim answers, and that all answers be checked after the interview for comprehensibility.

Consistency. To the extent that certain types of consistency were critical to the success of the survey, those consistencies were established as part of the interview criteria. The interviewer was sensitive for serious inconsistencies during the course of the interview and probed appropriately to resolve them. The CATI program displayed the answers to earlier questions to assist in the identification of inconsistencies, and automatically identified inconsistencies. To handle these problems, the CATI program had a "comments" procedure so that interviewers could enter their comments on a particular question or interview when this helped to clarify an inconsistency or problem. These comments could be entered at any time during the interview by simply hitting the "Esc" key to open the comments window.

Particular care was devoted to editing open-ended questions. The responses to open-ended questions were typically recorded verbatim. To the extent possible, interviewers included the full statement including articles, prepositions and punctuation. Paraphrasing was not permitted in recording verbatim answers, but certain abbreviations were permitted.

The editors reviewed a printed transcript from the open-ended recording field. Special care was taken in editing open-ended questions for completeness, legibility and comprehensibility. Editors reviewed the transcripts between shifts so that if questions arose, the interview was less than one day old in the interviewer's mind.

Coding

After the survey questionnaire was thoroughly edited, all open-ended questions underwent coding. Coding is the technical procedure by which raw data are assigned to categories. These categories are numbers which can be recorded in a computer data file, then tabulated and counted through automatic data processing.

Once the coding scheme was determined, each questionnaire was coded for keypunching. The coder compared the verbatim answers to the response category codes and decided which category (code) best captured the essence of the raw data (response). Every effort was made by the contractor to make certain that the coder's judgment was faithful to the respondent's original meaning, as well as, responsive to those who are called upon to interpret those findings. The contractor has a large full-time coding staff which includes a Coding Supervisor and several senior coders. All questionnaires were manually coded by this group, under the direct supervision of the senior project staff. The coding staff was experienced in a broad range of standardized codes, but specialized training was employed for this coding assignment.

Training of coders took place after the Coding Supervisor met with the analysis team and prepared a Coding Manual for the survey. The Manual covered item-by-item coding instructions, general coding and editing specifications and special instructions. Each coder received a copy of the Coding Manual, and an item-by-item review was conducted during training. Coders typically made extensive notes in their Manuals and used them for reference during the actual coding process. Any additions to the Manual were made at the direction of the Coding Supervisor.

The element of coder judgment was most pronounced in the coding of open-ended questions. Even if codes were carefully constructed, these codes may still be ambiguously interpreted or inconsistently assigned to cases. Thus, extreme care was taken to standardize coding decision rules.

Quality control was automatically intensified when errors or inconsistencies in coding decisions were found. For each specific item in error, the appropriate section of the Coding Manual was reviewed by the Coding Supervisor and the individual coder.

Data Processing

This study was implemented utilizing the contractor's CATI system. The original programming of the survey questionnaire on to the CATI system included several machine edit features to ensure that survey records accurately mirrored respondents' reports.

More specifically, the CATI system:

- Eliminated problems of multi-punching. The CATI system automatically assigned single punch fields of appropriate width for each separate data item;
- Ensured that skip patterns were administered properly. Skip patterns were programmed into CATI's data entry software to ensure that all questions for which a particular respondent was qualified to answer were exhibited in appropriate sequence. This feature not only enhanced overall data quality by ensuring that the aggregated data base was comprehensive but also facilitated the actual interview procedures by eliminating hurried review of

previous, sometimes remote, items by interviewers in their attempt to determine respondent eligibility for the current question;

- Permitted immediate and comprehensive edits of the survey interview.

Data entry software was programmed to recognize allowable ranges for key-entered item values. Blanks were not accepted as legitimate values. If a question was left blank, CATI alerted the interviewer that an error was made. The questionnaire would not advance to the next screen if an appropriate value was too large. The error was identified and the survey was held in stasis until the entry was corrected. Often, checks were set to include only probable rather than all possible values. In this way, when a seemingly aberrant value was encountered, the interviewer would check immediately with the respondent to verify this answer. If the respondent confirmed this value, the interviewer entered a command and overrode the range check for that specific value in this survey item. Each and every item was checked on-line to ensure that the data collected was all within acceptable range specifications.

Consistency checks were programmed into the data entry software for a select set of items. Consistency checks were generally of three types: logical consistency, replicability or mathematical equivalence. Logical consistency is used in a situation in which a respondent, asked two separate questions about related items, responds similarly. Prior to CATI, if these items were not answered consistently, data cleaning had to wait until final machine edits -- days, weeks or even months after the interview had been terminated. Decisions about these data were always arbitrary and often masked the reality of the situation. With CATI, such inconsistencies were identified immediately and resolved or confirmed with the assistance of the interviewee him/herself.

Programming was designed to alert interviewers to inconsistencies as soon as they were discovered or just subsequent to the final survey items, but prior to interview termination. The point of alert was determined on an item-by-item basis. If a change in the inconsistent data affected questionnaire administration (e.g., changed respondent's eligibility status for a question or question series), the inconsistency was resolved immediately. If the data was sensitive in nature, or broaching the inconsistency with the respondent would be viewed as confrontational or cross, resolution of the inconsistency followed completion of the questionnaire. Again, such decisions were made on an item- by-item basis.

Other Machine Editing

The CATI system's capabilities to edit data on-line have been outlined above. However, as a software-driven process the amount of editing that could be performed in a timely manner, although quite sizable, was still limited. For example, although simple consistency could be generated for on-line use, complex consistency checks involving three or more variables or constructed variables were better when put off until after interviews had been completed and data placed in permanent storage. The size of the questionnaire, number of rotations accomplished, both within and between question series, and the number of skip patterns all affected the space left over for on-line edits.

Output from edit runs listed errors by error type (e.g., out of range), and location in the data base (e.g., VAR 004 card 2 col 54) and respondent identification number. Data editors then called up individual cases from the computer's active memory and reviewed errors that were detected. Corrections were made as needed. Since corrections were implemented

within the CATI data entry program, all on-line edits that generated new errors were immediately identified. Such changes were reevaluated and final decisions regarding data base updating were made only with the knowledge and approval of the contractor's project director.

Procedures for Protecting Confidentiality

Over the past several years, Abt SRBI has conducted numerous surveys involving sensitive information where absolute candor and confidentiality have been mandatory. Because of this experience, we are extremely conscious of the need to protect the privacy of the people who respond to these surveys and we implement procedures to ensure this outcome throughout all phases of Abt SRBI's work, simply as a matter of course. The problems of maintaining confidentiality begin at the very start of data collection in the field.

We believe that it is crucial that respondents fully understand and have confidence in the procedures taken to protect their privacy. We communicate Abt SRBI's approach to all respondents in a way that usually persuades them of Abt SRBI's ability and commitment to safeguard their right to privacy. Clearly, only if people accept Abt SRBI's guarantee of confidentiality will they consent to being interviewed, and provide accurate information during the interview itself. Consequently, we make every effort to convince respondents of Abt SRBI's commitment to ensure their privacy.

Respondents are informed in the survey introduction that their answers will be kept strictly confidential. Participation is on a voluntary basis, and the survey conforms with the requirements of the Privacy Act by omitting names, addresses or social security numbers from the data base. The last four digits of the telephone number will also be omitted from the data base.

All interviewers are required to sign a confidentiality agreement that specifies that no identification of respondents, nor their answers will be revealed to other persons that are not specifically involved with this project as an employee of Abt SRBI.

The anonymity and confidentiality of the respondent's survey answers are protected by keeping all identifiers on the sample record sheet, which is linked to the interview responses only by an ID number. Since this linkage makes it possible to compromise the confidentiality of the respondent's answers, the following steps are taken to protect it:

- Abt SRBI's Sampling Department generates a sample of phone numbers stratified according to geographic regions.
- The sample is computerized allowing the CATI system to automatically assign cases.
- The system brings up a phone number for the interview, automatically assigning the interview an identification number that can be linked to the phone number.
- The interviewer dials the number and records the outcome of any calling attempts into the CATI system. Request for callback information is also recorded into the CATI system.
- Names and address are not entered into the CATI program.

- All subsequent coding, data reduction and processing tasks will be conducted using only the ID numbers. The area code and the telephone exchange can be included as part of the completed interview for each case in the data set for analysis purposes. However, the telephone number was eliminated from the data set that was delivered to the client. The telephone number was not included in the computer-readable data base provided to the client.

In nearly a decade of sensitive work, Abt SRBI has never suffered a breach of any respondent's privacy.

Precision of Sample Estimates

The objective of the sampling procedures used on this study was to produce a random sample of the target population. A random sample shares the same properties and characteristics of the total population from which it is drawn, subject to a certain level of sampling error. This means that with a properly drawn sample we can make statements about the properties and characteristics of the total population within certain specified limits of certainty and sampling variability.

The confidence interval for sample estimates of population proportions, using simple random sampling without replacement, is calculated by the following formula:

$$p \pm z_{\alpha/2} \cdot SE(p) = p \pm z_{\alpha/2} \cdot \sqrt{\frac{(p \cdot q)}{(n-1)}}$$

Where:

SE(p) = the standard error of the sample estimate for a proportion

p = some proportion of the sample displaying a certain characteristic or attribute

q = (1 - p)

n = the size of the sample

$z_{\alpha/2}$ = (1-α/2)-th percentile of the standard normal distribution (1.96 for 95% CI)

The sample sizes for the surveys are large enough to permit estimates for sub-samples of particular interest. Figure 4 presents the expected size of the sampling error for specified sample sizes of 5,000 and less, at different response distributions on a categorical variable. As the table shows, larger samples produce smaller expected sampling variances, but there is a constantly declining marginal utility of variance reduction per sample size increase.

Estimating Statistical Significance

The estimates of sampling precision presented in the previous section yield confidence bands around the sample estimates, within which the true population value should lie. This type of sampling estimate is appropriate when the goal of the research is to estimate a

population distribution parameter. However, the purpose of some surveys is to provide a comparison of population parameters estimated from independent samples (e.g. annual tracking surveys) or between subsets of the same sample. In such instances, the question is not simply whether or not there is any difference in the sample statistics that estimate the population parameter, but rather is the difference between the sample estimates statistically significant (i.e., beyond the expected limits of sampling error for both sample estimates).

To test whether or not a difference between two sample proportions is statistically significant, a rather simple calculation can be made. The maximum expected sampling error (i.e., confidence interval in the previous formula) of the first sample is designated ***s1*** and the maximum expected sampling error of the second sample is ***s2***. The sampling error of the difference between these estimates is ***sd*** and is calculated as:

$$\mathrm{sd} = \sqrt{(s1^2 + s2^2)}$$

Any difference between observed proportions that exceeds sd is a statistically significant difference at the specified confidence interval. Note that this technique is mathematically equivalent to generating standardized tests of the difference between proportions.

An illustration of the pooled sampling error between sub-samples for various sizes is presented in Figure 5. This table can be used to determine the size of the difference in proportions between drivers and non-drivers or other sub-samples that would be statistically significant.

FIGURE 4
Expected Sampling Error (Plus or Minus)
At the 95% Confidence Level (Simple Random Sample)

Size of Sample or Subsample	Percentage of the Sample or Sub-sample Giving A Certain Response or Displaying a Certain Characteristic for Percentages Near:				
	10 or 90	**20 or 80**	**30 or 70**	**40 or 60**	**50**
5,000	0.8	1.1	1.3	1.4	1.4
4,500	0.9	1.2	1.3	1.4	1.5
4,000	0.9	1.2	1.4	1.5	1.5
3,000	1.1	1.4	1.6	1.8	1.8
2,000	1.3	1.8	2.0	2.1	2.2
1,500	1.5	2.0	2.3	2.5	2.5
1,300	1.6	2.2	2.5	2.7	2.7
1,200	1.7	2.3	2.6	2.8	2.8
1,100	1.8	2.4	2.7	2.9	3.0
1,000	1.9	2.5	2.8	3.0	3.1
900	2.0	2.6	3.0	3.2	3.3
800	2.1	2.8	3.2	3.4	3.5
700	2.2	3.0	3.4	3.6	3.7
600	2.4	3.2	3.7	3.9	4.0
500	2.6	3.5	4.0	4.3	4.4
400	2.9	3.9	4.5	4.8	4.9
300	3.4	4.5	5.2	5.6	5.7
200	4.2	5.6	6.4	6.8	6.9
150	4.8	6.4	7.4	7.9	8.0
100	5.9	7.9	9.0	9.7	9.8
75	6.8	9.1	10.4	11.2	11.4
50	8.4	11.2	12.8	13.7	14.0

NOTE: Entries are expressed as percentage points (+ or -)

FIGURE 5. Pooled Sampling Error Expressed as Percentages for Given Sample Sizes (Assuming P=Q)

Sample Size																	
4000	14.1	10.0	7.1	5.9	5.1	4.7	4.3	4.0	3.8	3.6	3.5	3.0	2.7	2.5	2.4	2.3	2.2
3500	14.1	10.0	7.1	5.9	5.2	4.7	4.3	4.1	3.8	3.7	3.5	3.0	2.7	2.6	2.4	2.3	
3000	14.1	10.0	7.2	5.9	5.2	4.7	4.4	4.1	3.9	3.7	3.6	3.1	2,8	2.7	2.5		
2500	14.1	10.0	7.2	6.0	5.3	4.8	4.5	4.2	4.0	3.8	3.7	3.2	2.9	2.8			
2000	14.2	10.1	7.3	6.1	5.4	4.9	4.6	4.3	4.1	3.9	3.8	3.3	3.1				
1500	14.2	10.2	7.4	6.2	5.5	5.1	4.7	4.5	4.3	4.1	4.0	3.6					
1000	14.3	10.3	7.6	6.5	5.8	5.4	5.1	4.8	4.7	4.5	4.4						
900	14.4	10.4	7.7	6.5	5.9	5.5	5.2	4.9	4.8	4.6							
800	14.4	10.4	7.8	6.6	6.0	5.6	5.3	5.1	4.9								
700	14.5	10.5	7.9	6.8	6.1	5.7	5.5	5.2									
600	14.6	10.6	8.0	6.9	6.3	5.9	5.7										
500	14.7	10.8	8.2	7.2	6.6	6.2											
400	14.8	11.0	8.5	7.5	6.9												
300	15.1	11.4	9.0	8.0													
200	15.6	12.1	9.8														
100	17.1	13.9															
50	19.8																
	50	100	200	300	400	500	600	700	800	900	1000	1500	2000	2500	3000	3500	4000
Sample Size																	

Non-Response Analysis

Non-response analysis was conducted on the cross-section sample to determine if there was bias in the sample as a result of refusals, terminates and partial interviews and non-completes. The non-response analyses for this study were conducted in two phases. In the first phase cohort prevalence was compared across disposition groups to determine the extent to which the group of completed interviews differed from those not in the final data set, and key variables among the completed interviews were evaluated to determine the degree of colinearity between sample demographics and survey responses. The second phase of the non-response analyses consisted of breaking the sample of completed and non-completed interviews by the age of the child to determine the extent to which, if any, the survey protocol introduced non-response bias into the final data set.

The households in the over-sample were excluded from the non-response analyses to ensure an unbiased comparison of outcomes. For the 2008 survey, a random sample of 170,058 telephone numbers was drawn from a geographically stratified national sampling frame. Bad numbers (NIS, disconnected, fax tones, businesses, etc.), screen-outs (no children under age 18 in household), and non-interviewable households (no English or Spanish speakers, hearing or health problems, etc.) were also excluded from the analyses. A total of 39,561 records were included in the non-response analyses.

The final dispositions were recoded into four groups, Completes, Incompletes, Refusals, and Non-contacts. For the first analyses, a set of four demographic variables, supplied by the sample vendor for the original set of telephone numbers, were appended to the data file. Each variable is estimated at the six digit exchange level (i.e., area-code/prefix combination). The first five variables contain a percent prevalence estimate of each cohort (Black, Hispanic, Asian, White, Native American) for a given exchange, while the sixth is a mean income estimate. A summary of these variables for the sample of 39,561 telephone numbers is displayed in Figure 6.

Figure 6
Descriptive Statistics for Sample Demographics

Cohort	Mean	SD	Standard Error	Min	Max
BLACK	9.58%	15.33%	.08%	0%	98%
HISPANIC	8.32%	13.76%	.07%	0%	98%
ASIAN	3.15%	6.04%	.03%	0%	78%
WHITE	80.22%	19.4%	.10%	0%	100%
NATIVE AMERICAN	0.52%	2.8%	.01%	0%	98%
INCOME	$68,419	$35,129	$177	$0	$299,780

In the first phase of the non-response analyses, cohort prevalence was compared across disposition groups to determine the extent to which the group of completed interviews differed from those not in the final data set, and key variables among the completed interviews were evaluated to determine the degree of colinearity between sample demographics and survey responses. Here a conservative approach was used to control for family-wise error rate inflation when making the first set of comparisons. For each of the six cohorts, a one-way ANOVA was conducted to evaluate overall differences before making individual group

comparisons. All four ANOVA comparisons were significant ($p < .001$). Post-hoc comparisons of individual groups were conducted using Bonferroni adjustments to maintain a true confidence level of 99 percent. These comparisons are displayed in Figure 7.

Figure 7
Demographic Group Post-hoc Comparisons

Demographic	Group	n	Mean	Difference	Std. Error	p-value	
BLACK	Complete	3,053	8.48				
	Incomplete	13,161	9.68	- 1.19	.305	< 0.001	*
	Refuse	5,467	7.24	1.24	.344	0.002	*
	Non-Contact	17,880	10.41	- 1.93	.297	0.001	*
HISPANIC	Complete	3,053	7.72				
	Incomplete	13,161	8.87	- 1.15	.274	0.002	*
	Refuse	5,467	6.13	1.59	.309	< 0.001	*
	Non-Contact	17,880	8.70	- 0.98	.267	< 0.001	*
ASIAN	Complete	3,053	2.44				
	Incomplete	13,161	3.06	- 0.63	.120	< 0.001	*
	Refuse	5,467	2.68	- 0.24	.135	0.451	
	Non-Contact	17,880	3.47	- 1.04	.117	< 0.001	*
WHITE	Complete	3,053	81.60				
	Incomplete	13,161	79.83	1.77	.386	< 0.001	*
	Refuse	5,467	84.27	- 2.68	.434	< 0.001	*
	Non-Contact	17,880	79.03	2.57	.376	< 0.001	*
NATIVE AMERICAN	Complete	3,053	0.66				
	Incomplete	13,161	0.61	0.05	.056	0.001	*
	Refuse	5,467	0.44	0.22	.063	0.002	*
	Non-Contact	17,880	0.46	0.20	.055	1.000	
INCOME	Complete	3,053	$66,815				
	Incomplete	13,161	$65767	$1,048	$699	0.802	
	Refuse	5,467	$74,169	- $7,354	$787	< 0.001	*
	Non-Contact	17,880	$68,890	- $2,075	$681	0.014	

* Significant at $\alpha = .01$.

In Figure 7 we see that the average prevalence of Blacks among households who completed the survey was lower than that of households who did not complete the survey (Δ = -1.19), and those who were not contacted (Δ = -1.93), and higher than that of households who refused to participate (Δ = 1.24). We also see a similar pattern for the prevalence of Asian and Hispanic households, while the inverse is true for the prevalence of White households. The average income estimates of households who refused to participate also appear to be significantly greater than that of the those who completed the survey (Δ = -$7,354). The patterns of differences observed among these demographic cohorts are consistent with one might expect of typical survey non-response patterns. The relatively large sample sizes may also contribute to the large number of significant findings among these comparisons.

To better understand the practical importance of these observed differences, attempts

were made to determine the degree to which these demographic characteristics are associated with the survey outcomes. For a select set of survey items the cohort prevalence was compared across response options to evaluate the relationship between cohort and the opinions and experiences expressed by those who completed the survey. A total of 3 different survey items were selected for review. These items are summarized in Figure 8 below.

Figure 8
Survey Items Analyzed

Item	Question
PI7	How much of a problem is violence in your neighborhood?
PI9	Would you like to see youth organization pay more or less attention to preventing victimization?
PI16	In the last year, has your child lived somewhere besides your household?

For each of the survey items listed in Figure 8, the mean prevalence for each cohort was compared across responses. Overall comparisons of cohorts across response sets to question PI7 (How much of a problem is violence in your neighborhood?) were significant for all cohorts (Black: $F = 65.59$, $p < .001$; Hispanic: $F = 18.09$, $p < .001$; Asian: $F = 4.65$, $p = .001$; White: $F = 73.63$, $p < .001$; Native American: $F = 2.92$, $p = .033$; Income: $F = 32.98$, $p < .001$). As can be seen in Figure 9, it appears that Black race and Hispanic penetration estimates appear to be higher among households who report problems of neighborhood violence, while estimates of White race penetration and average income are lower.

Figure 9
How much of a problem is violence in your neighborhood?

Demo	Group	n [a]	Mean	Difference	Std. Error	p-value	
BLACK	Big problem	62	27.56				
	Somewhat of a problem	205	16.78	10.78	1.942	< 0.001	*
	Not too much of a problem	691	10.23	17.33	1.773	< 0.001	*
	Not a problem at all	2,088	6.48	21.08	1.724	< 0.001	*
HISPANIC	Big problem	62	13.89				
	Somewhat of a problem	205	11.98	1.92	1.947	1.000	
	Not too much of a problem	691	9.91	3.98	1.778	0.151	
	Not a problem at all	2,088	6.38	7.51	1.728	< 0.001	*
ASIAN	Big problem	62	2.92				
	Somewhat of a problem	205	3.56	-0.64	0.724	1.000	
	Not too much of a problem	691	2.75	0.18	0.661	1.000	
	Not a problem at all	2,088	2.20	0.72	0.643	1.000	
WHITE	Big problem	62	58.78				
	Somewhat of a problem	205	69.29	-10.51	2.624	< 0.001	*
	Not too much of a problem	691	77.58	-18.80	2.396	< 0.001	*
	Not a problem at all	2,088	84.86	-26.08	2.329	< 0.001	*
NATIVE	Big problem	62	0.44				
AMERICAN	Somewhat of a problem	205	1.34	-0.90	0.503	0.445	
	Not too much of a problem	691	0.69	-0.25	0.460	1.000	
	Not a problem at all	2,088	0.59	-0.16	0.447	1.000	
INCOME	Big problem	62	$41,728				
	Somewhat of a problem	205	$51,286	- $9,557	$4,743	0.264	
	Not too much of a problem	691	$61,655	- $19,926	$4,331	< 0.001	*
	Not a problem at all	2,088	$70,863	- $29,135	$4,209	< 0.001	*

* Significant at α = .05. [a] n = 3,053: (VOL) Not Sure = 7 .

Comparisons of cohorts across response sets to question PI9 (Would you like to see youth organizations pay more or less attention to preventing victimization?) were significant for all cohorts except Asian and Native American (Black: $F = 17.32$, $p < .001$; Hispanic: $F = 10.35$, $p < .001$; White: $F = 22.59$, $p < .001$; Income: $F = 8.53$, $p < .001$). A similar pattern of responses emerged for this item (Figure 10). Estimates of Black race and Hispanic ethnicity were significantly lower among those who said that the attention youth organizations spend on preventing victimization should stay the same as apposed to those who said they should pay more attention to preventing victimization. Again the opposite was true for White race and average income estimates.

Figure 10
Would you like to see youth organizations pay more or less attention to preventing victimization?

Demo	Group	n [a]	Mean	Difference	Std. Error	p-value	
BLACK	Pay more attention	2,064	9.72				
	Pay less attention	26	8.00	1.72	2.771	1.000	
	Stay about the same	852	5.73	3.99	0.568	< 0.001	*
	(VOL) Not Sure	110	6.41	3.32	1.367	0.092	
HISPANIC	Pay more attention	2,064	8.63				
	Pay less attention	26	7.62	1.02	2.704	1.000	
	Stay about the same	852	5.55	3.08	0.554	< 0.001	*
	(VOL) Not Sure	110	7.23	1.40	1.334	1.000	
WHITE	Pay more attention	2,064	79.74				
	Pay less attention	26	82.73	-2.99	3.748	1.000	
	Stay about the same	852	86.07	-6.32	0.768	< 0.001	*
	(VOL) Not Sure	110	81.70	-1.96	1.850	1.000	
INCOME	Pay more attention	2,064	$64,714				
	Pay less attention	26	$66,709	- $1,995	$6,637	1.000	
	Stay about the same	852	$71,529	- $6,815	$1,361	< 0.001	*
	(VOL) Not Sure	110	$68,984	- $4,270	$3,276	1.000	

* Significant at α = .05. [a] n = 3,053: (VOL) Refuse = 1 .

There were no significant differences in cohort estimates among those whose child had lived at another residence within the last year as apposed to those who hadn't (see Figure 11).

Figure 11
In the last year, has your child lived somewhere besides your household?

Demographic	Group	n [a]	Mean	F	p-value
BLACK	Yes	172	7.18		
	No	2,832	8.56	1.544	0.214
HISPANIC	Yes	172	7.12		
	No	2,832	7.76	0.346	0.557
ASIAN	Yes	172	1.75		
	No	2,832	2.48	3.322	0.068
WHITE	Yes	172	82.99		
	No	2,832	81.51	0.965	0.326
NATIVE	Yes	172	1.03		
AMERICAN	No	2,832	0.64	2.056	0.152
INCOME	Yes	172	$63,263		
	No	2,832	$67,031	2.015	0.156

[a] n = 3,053: Refuse = 1 .

Based on population estimates and counts from the completed sample, it appears that there is some interaction between survey item response and the demographic composition of those who respond. Thus the extent that the completed sample under or over represents certain members of the population, survey estimates may become be less precise. Given that these interactions appear to be primarily associated the Black race, Hispanic ethnicity and Income, a survey weighting procedure was developed to take this into account to be sure that these groups are properly represented.

The second phase of the non-response analyses consisted of breaking the sample of completed and non-completed interviews by the age of the child to determine the extent to which, if any, the survey protocol introduced non-response bias into the final data set. For this set of analyses, responses for the parent interview items (PI1 to PI76) were to compared among completed interviews and those where the child portion was not completed (parent complete).2 In all, there were 34 separate items that were compared.[3]

Comparisons were made separately for households with children age 10 to 13, and for households with children ages 14 to 17. Among households where the child was age 10 to 13, only 4 of the 34 items showed any significant difference in responses patterns (see Figure 12). Here it appears that households where only the parent participated in the survey, slightly more reported that their child had been diagnosed with Autism, PDD, or Asperger's syndrome (PI36_5), or a Developmental delay or retardation (PI36_6). These households were also more likely to say that they never or rarely lost their temper when their child misbehaved (PI54) and that their child never or rarely went out with friends they did not know (PI67).

Figure 12
Response Comparisons for Parent completes Vs. Completes (Children 10 to 13)

Item / Response	Group	n	Count	Freq.	χ - square	p-value
PI36_5: Yes	Parent Compete	737	21	2.8%		
	Complete	656	4	0.6%	9.878	.002
PI36_6: Yes	Parent Compete	736	19	2.6%		
	Complete	657	5	0.8%	6.794	.009
PI54: Never/Rarely	Parent Compete	737	575	78.0%		
	Complete	658	476	72.2%	6.349	.012
PI67: Never/Rarely	Parent Compete	738	726	98.4%		
	Complete	657	636	96.8%	3.711	.054

*Excludes DK/REF

Only 4 of the 34 items showed any significant difference in responses patterns among households where the child was between 14 and 17 years of age (see Figure 13). Households where only the parent participated in the survey were slightly more likely to report that their child had been diagnosed with a learning disorder (PI36_8). These households were also more likely to say that they never or rarely lost their temper when their child misbehaved (PI54), more likely to say that they never or rarely argued with their child (PI63), and less likely to say that their child went out with friends they did not know (PI67).

2 There were no significant differences in geographic region, race, ethnicity, gender or income responses among these groups.
3 Items included: PI6, PI7, PI8, PI9, PI32, PI33, PI34, PI36_1, PI26_2, PI26_3, PI36_4, PI36_5, Pi36_6, PI36_7, PI36_8, PI38, PI54, PI55, PI56, PI57, PI58, PI59, PI60, PI61, PI62, PI63, PI64, PI65, PI66, PI67, PI68, PI69, PI70, PI71.

Figure 13
Response Comparisons for Parent completes Vs. Completes (Children 14 to 17)

Item / Response	Group	n	Count	Freq.	χ - square	p-value
PI36_8: Yes	Parent Compete	668	60	9.0%		
	Complete	890	52	5.8%	5.637	.018
PI54: Never/Rarely	Parent Compete	665	574	76.8%		
	Complete	889	647	72.5%	3.626	.057
PI63: Never/Rarely	Parent Compete	667	311	46.6%		
	Complete	892	370	41.5%	4.109	.043
PI67: Never/Rarely	Parent Compete	664	574	86.4%		
	Complete	891	805	90.3%	5.772	.016

*Excludes DK/REF

Given the large number of comparisons made, the relatively large sample size and the sensitivity of Chi-square tests, it is not entirely surprising to see these differences in the two samples. Given the small number of differences and the relative size of those differences observed, it was concluded that the method of conducting the interviews (parent/child) did not introduce non-response bias that would warrant adjustments to the resulting completed data file to compensate for this methodology. Given the small number of differences, such attempts would be more likely to introduce bias than reduce it. Thus the weighting procedures will only include adjustments for oversampling and non-response as mentioned above. The weighting procedures are outlined in the following section.

Sample Weighting

The characteristics of a perfectly drawn sample of a population will vary little from true population characteristics only within certain limits of sample variability (i.e., sampling error). Unfortunately, social surveys do not permit for perfect samples. The sampling frames available to survey researchers are less than perfect because of participant access limitations. The absence of perfect cooperation from sampled units means that the completed sample will differ from the original drawn sample. In order to correct these known problems of sample bias, the achieved sample is weighted to certain characteristics of the total population.

The weighting plan for the survey was a multi-stage sequential process of weighting the achieved sample to correct for sampling and non-sampling biases in the final sample.

The survey included both a cross-sectional sample of 3,000 households with children under 18 years old, and an over-sample of 500 Hispanics, 500 African Americans and 500 Low Income households. The first step in the weighting process was to correct for selection procedures designed to deliberately select a disproportionate number of these racial/ethnic/income groups (phone numbers were only sampled from telephone exchanges that had a population of 70% or more of that group). Hence, the total achieved sample yielded a disproportionate sample distribution by race/ethnicity and income. For each strata, the household weight (HHWEIGHT) was computed using cohort density information provided by the sample vendor. Commercial sample vendors have access to databases that allow them to develop population estimates for various demographic cohorts among telephone exchanges (are code, prefix combinations).

A given exchange will include an estimate (0% to 100%) of the Black race penetration, Hispanic penetration, and an estimate of the mean income. Estimates of the number of exchanges having a given cohort density were used to adjust the number of observed records in the completed sample generated from telephone exchanges with the same cohort density for each strata (HHWEIGHT).

The HHWEIGHT was used to correct the achieved sample for disproportionate sampling by dividing the expected population distribution, based on Census projections, by the achieved sample distribution on the stratification variables (race, ethnicity, mean income). Specifically, this weight corrected the sample to the cell distribution of the population using the 2000 Census Population Projections of number of households for the geographic areas used in the over sample.

The next step in the weighting process was to correct for selection procedures that yielded unequal probability of selection within sampled households. Although the survey was designed as a population survey, only one eligible child or adolescent per household could be interviewed (because multiple interviews per household are burdensome and introduce additional design effects into the survey estimates). A respondent's probability for selection is inverse to the size (number of other eligible children/adolescents) of the household. Hence, this weight was equal to the number of eligible respondents within the household.

BASEWEIGHT was computed by multiplying the household weight (HHWEIGHT) by the number of eligible respondents in each household (NUMCHILD). This adjusts the responses to match the number of children eligible for selection in each household.

BASEWEIGHT = HHWEIGHT * NUMCHILD

The final step in the weighting process was designed to correct for the fact that the total number of cases in the weighted sample was larger than the unweighted sample size because of the use of the number of eligible weight. In order to avoid misinterpretation of sample size, the total number of cases in the unweighted sample was divided by the total number of cases in the weighted sample to yield a sample size weight. When this weight is applied, the size of the weighted sample is identical to the size of the unweighted sample.

The final weights assigned to each record were produced by post-stratifying the sample to match the gender and age of the population among each of the three strata as defined in the formula below. In this formula, POSTSTRAT is computed by dividing the number of people in an age-by-gender category in the population by the sum of the products of the base weights for the respondents in that same age-by-gender category for a given strata. Post-stratification adjusts for non-coverage and non-response. FINALWEIGHTs were scaled to match the number of completed records in the sample while represented the population within the given strata.

FINALWEIGHT = BASEWEIGHT * POSTSTRAT

REFERENCES

Casady, R. and Lepkowski, J. Stratified Telephone Survey Designs, Survey Methodology, June 1993, Vol 19, No 1: 103-13.

Groves, R. An Empirical Comparison of Two Telephone Sample Designs. Journal of Market Research, 1978 15:622-31.

Kish, L. A Procedure for Objective Respondent Selection Within the Household. Journal of American Statistical Association 1949 44: 380-387.

Keeter, S. Estimating Telephone Non-coverage bias with a Telephone Survey. Presented at the Annual Conference of the American Association for Public Opinion Research, St. Petersburg, FL, May 1992.

Lavrakas, P. Telephone Survey Methods: Sampling, Selection and Supervision. Beverly Hills: Sage Publications, 1987.

Salmon, C. and Nichols, J. Respondent Selection Techniques for Telephone Surveys. Presented to the Midwest Association for Public Opinion Research, Chicago, IL, 1980.

Statistical Characteristics of Random Digit Telephone Sample. Survey Sampling, Inc. Westport, CT 1986.

Tarnai, J., Rosa, E. and Scott, L. An Empirical Comparison of the Kish and the Most Recent Birthday Method for Selecting a Random Household Respondent in Telephone Surveys. Presented at the Annual Meeting of the American Association for Public Opinion Research, Hershey, PA, 1987.

Troldahl, V. and Carter, R. Random Selection of Respondents Within Households in Phone Surveys. Journal of Marketing Research, 1964 1:71-76.

Waksberg, J. Sampling Methods for Random Digit Dialing. Journal of the American Statistical Association, 1978 361: 40-46.

APPENDIX A: AAPOR Standard Definitions for Response Rates, Cooperation Rates and Refusal Rates

Response Rate 1 (RR1), or the minimum response rate, is the number of complete interviews divided by the number of interviews (complete plus partial) plus the number of non-interviews (refusal and break-off plus non-contacts plus others) plus all cases of unknown eligibility (unknown if housing unit, plus unknown, other).

Response Rate 2 (RR2) counts partial interviews as respondents.

Response Rate 3 (RR3) estimates what proportion of cases of unknown eligibility is actually eligible. In estimating e, one must be guided by the best available scientific information on what share eligible cases make up among the unknown cases and one must not select a proportion in order to boost the response rate. The basis for the estimate must be explicitly stated and detailed. It may consist of separate estimates (Estimate 1, Estimate 2) for the sub-components of unknowns (3.10 and 3.20) and/or a range of estimators based of differing procedures. In each case, the basis of all estimates must be indicated.

Response Rate 4 (RR4) allocates cases of unknown eligibility as in RR3, but also includes partial interviews as respondents as in RR2.

Response Rate 5 (RR5) is either a special case of RR3 in that it assumes that e=0 (i.e. that there are no eligible cases among the cases of unknown eligibility) or the rare case in which there are no cases of unknown eligibility.

Response Rate 6 (RR6) makes that same assumption and also includes partial interviews as respondents. RR5 and RR6 are only appropriate when it is valid to assume that none of the unknown cases are eligible ones, or when there are no unknown cases. RR6 represents the maximum response rate.

Cooperation Rates

A cooperation rate is the proportion of all cases interviewed of all eligible units ever contacted. There are both household-level and respondent-level cooperation rates. The rates here are household-level rates. They are based on contact with households, including respondents, rather than contacts with respondents only. Respondent-level cooperation rates could also be calculated using only contacts with and refusals from known respondents.

Cooperation Rate 1 (COOP1), or the minimum cooperation rate, is the number of complete interviews divided by the number of interviews (complete plus partial) plus the number of non-interviews that involve the identification of and contact with an eligible respondent (refusal and break-off plus other).

Cooperation Rate 2 (COOP2) counts partial interviews as respondents.

Cooperation Rate 3 (COOP3) defines those unable to do an interview as also incapable of cooperating and they are excluded from the base.

Cooperation Rate 4 (COOP4) does the same as Cooperation Rate 3, but includes partials as interviews.

Refusal Rates

A refusal rate is the proportion of all cases in which a housing unit or respondent refuses to do an interview, or breaks-off an interview of all potentially eligible cases.

Refusal Rate 1 (REF1) is the number of refusals divided by the interviews (complete and partial) plus the non-respondents (refusals, non-contacts, and others) plus the cases of unknown eligibility.

Refusal Rate 2 (REF2) includes estimated eligible cases among the unknown cases similar to Response Rate 3 (RR3) and Response Rate 4 (RR4) above.

Refusal Rate 3 is analogous to Response Rate 5 (RR5) and Response Rate 6 (RR6) above. As in those cases the elimination of the unknowns from the equation must be fully justified by the actual situation. Non-contact and other rates can be calculated in a manner similar to refusal rates. Refusal, non-contact, and other rates will sum to equal the non-response rate.

Contact Rates

A contact rate measures the proportion of all cases in which some responsible member of the housing unit was reached by the survey.

Contact Rate 1 (CON1) assumes that all cases of indeterminate eligibility are actually eligible.

Contact Rate 2 (CON2) includes in the base only the estimated eligible cases among the undetermined cases.

Contact Rate 3 (CON3) includes in the base only known eligible cases.

Source: "Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys 2004" by The American Association for Public Opinion Research. pp. 28-32.

Appendix B: Questionnaire