

*Attachment 2. Report of SCV Cognitive Test  
Findings*

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# **Methodological Research to Support the National Crime Victimization Survey**

## **Findings from the NCVS Mail Survey Cognitive Testing Activities**

**August 2011**

**Submitted To**

U.S. Department of Justice  
Office of Justice Programs  
Bureau of Justice Statistics  
Grants.gov upload

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## **Findings from the NCVS Mail Survey Cognitive Testing Activities**

This report summarizes the results of the cognitive testing of the mail survey instrument developed for the National Crime Victimization Survey (NCVS) mode and incentive study being conducted by RTI International under the title "Survey of Crime Victimization (SCV)." Section 1 provides a brief discussion of the development of the mail survey instrument. Section 2 describes the preliminary assessment of the draft mail survey instrument conducted prior to OMB review, including findings from the assessment and areas targeted for further refinement and testing. Section 3 describes the results of the Phase 1 cognitive testing activities, which included two rounds of cognitive testing following OMB review and approval of the test protocol. Finally, Section 4 provides overall findings and conclusions from the testing activities and implications for the Phase 2 field test. Copies of the final version of the mail survey instrument, the household roster, and interview guide used in the cognitive test are provided in Appendices A, B, and C, respectively.

### **1. Development of the Mail Survey Instrument**

To facilitate self-administration, RTI created a reformatted, single-instrument version of the NCVS Screener and Crime Incident Report (CIR) for mail administration. This involved reviewing each question and response set in the Screener and CIR, identifying with BJS the items critical for crime classification, assessing the complexity of each item for self-administration via paper-and-pencil, and determining methods for simplifying the respondent task by eliminating or revising complex skip patterns. Basic respondent demographic questions from the NCVS Control Card were incorporated into the draft instrument, along with the household roster items.

Preliminary assessment of the mail survey instrument (described in Section 2) identified target areas for additional refinements. Additionally, to reduce survey length, questions about the characteristics of the offender(s) (e.g., in a gang, drinking or on drugs), injuries or hospitalizations resulting from the crime, steps taken to protect self or property during the crime, and presence of others during the crime were removed from the instrument.

### **2. Preliminary Assessment of the Mail Survey Instrument**

To inform refinements to the mail survey instrument, RTI conducted a preliminary cognitive assessment of the instrument content and format. Cognitive interviews usually require a small number of participants, typically less than 10. Ackerman and Blair (2006) note that the number of cognitive interviews performed for any given project is generally somewhat small due to budget and schedule constraints. Testing is generally done in an iterative fashion with subsequent rounds of cognitive interviews testing the materials revised in response to findings from the first round of testing.

The survey literature does not provide explicit guidance on the optimal number of cognitive interviews or the number of pretest iterations. The current NCVS questions have been cognitively tested, but reformatting these questions for a self-administered mail survey was expected to present substantial challenges. Preliminary cognitive interviews were envisioned as a method of identifying specific target areas on which to focus additional developmental work. A small number of cognitive interviews were conducted to provide insight into the viability of administering the questions in a self-administered format. The issues identified during the preliminary testing indicated certain problem areas for mail administration. Additional testing was undertaken to determine whether the mail instrument is a viable option for the field test.

Between December 2010 and early January 2011, 9 cognitive interviews were conducted at RTI by survey methodologists experienced in cognitive interviewing methods. Participant recruitment for the cognitive interviews was carried out by RTI using advertisements placed on Craig's List for the Raleigh-Durham, NC, area and in RTI internal classifieds, and through postings at local public health departments, domestic violence shelters, and other similar locations. Interested candidates were first screened to determine their eligibility for the cognitive interview. The screening script contained questions on crime experiences (similar to the Screener) as well as questions on basic demographic characteristics in an effort to recruit a diverse mix of participants.

RTI staff and their family members were not eligible to participate in the cognitive test. Additionally, persons who had not experienced a crime in the past 6 months, were under age 18, or did not speak English were excluded. To ensure participants would be eligible to fill out the majority of the SCV questionnaire, selected candidates had at least one crime experience that is a focus of the survey instrument (e.g., theft, break-in, or attack of any kind). Additionally, candidates with a variety of crime experiences were chosen in order to test as many different questions and routing patterns in the mail survey instrument as possible. Cognitive interview subjects were selected from the pool of screened, eligible candidates.

Cognitive interviews were conducted in person at RTI's main campus in North Carolina. All participants signed a consent form prior to beginning the interview, which was read to them by the interviewer. A copy of the form was provided for the participant's records. The consent form included a separate request to audio record the interview to facilitate note-taking, with recordings to be destroyed shortly after the summary reports were prepared and analyzed. All reports were written in a common summary shell that was exported into Excel so that responses to the same questions could be seen for all participants.

During the cognitive interview, participants were first asked to complete the hardcopy mail survey instrument on their own. To maximize confidentiality during the interview, participants were instructed to record only first and last initials when answering the household roster items on the mail survey, and to enter "Xs" for their phone number. After completing the screening portion of the survey, they participated in a guided think-aloud process with the interviewer in which the respondent was asked to discuss individual questions and response sets in the instrument to gauge their ease or difficulty in completing the survey, their ability to successfully navigate through the instrument (for example, following skip instructions and marking answer choices), and their understanding of definitions and terminology in the survey.

Next, participants were asked to continue with the rest of the survey (first CIR, followed by additional CIRs where applicable) and when finished, went through the same think-aloud process, discussing any problems they encountered in completing the survey. The interviews averaged 86 minutes and included a review of a number of questionnaire items, including some that had been cognitively tested previously for the NCVS. This was to look for any context effects that may have been introduced with the removal of some items and to gauge how well the items worked in a self-administered format. The screener portion of the survey averaged 7 minutes; while the first CIR took 13 minutes to complete (the average length for the subsequent CIRs was much less, about 7 minutes for the second, and 8 minutes for the third CIR among respondents who experienced more than one crime). All cognitive interview participants received \$40 cash as compensation for their time.

The results of the preliminary cognitive testing are summarized below:

- Respondents often made errors in filling in the household roster questions. They did not read or follow the provided instructions, and included themselves or other persons who should have been excluded from the roster.
- Respondents had difficulty following skip patterns on a number of items. Some questions could not be easily located when skipping, or respondents failed to see and follow provided skip instructions. In particular, respondents found it problematic when the skip patterns required them to turn multiple pages and locate a question that was somewhere other than the top left corner of the page, or when a question involved different skip patterns depending on the answer the respondent selected.
- Respondents did not understand the meaning of some of the question terminology, including “evidence,” “incident,” “dwelling,” or “offender.” Additionally, there was confusion about how to answer some CIR questions when the crime incident occurred somewhere other than the respondent’s home (e.g., at work).
- Respondents had difficulty providing the age of household members in the roster and understanding that the income question was seeking annual income for the household.
- Respondents had difficulty keeping track of the specific crime incident they were being asked to provide details for in the CIR. In some cases, respondents combined multiple crime incidents into one CIR, or tried to split out crimes that occurred in the same incident across multiple CIRs. Additionally, the questions and skip instructions specific to crime series (multiple incidents of the same type of crime) were not easily understood.
- Overall, respondents expressed concern about the length and complexity of the hardcopy survey instrument, including the number of questions they were being asked to answer and the wordiness of some items.
- Finally, the test identified a number of items where consideration should be given to clarifying the intent of the question and/or expanding or refining the response options based on the information provided by the cognitive interview respondents.

In response to these preliminary test results, additional cognitive testing activities were planned. Exhibit 1 summarizes the mail survey revisions resulting from the preliminary cognitive test findings.

**Exhibit 1. Summary of Mail Survey Revisions Resulting from Preliminary Cognitive Test Findings**

Preliminary Cognitive Test Findings	Resulting Mail Survey Revisions
Errors in filling out the household roster	The household roster and questions about the number of children in the household were removed from the mail survey. Enumeration of household members will be done in the CAPI and CATI interview with the household respondent. Only basic demographic information about the mail survey respondent was retained in the hardcopy form, including gender and age.
Navigation errors (e.g., difficulty in following skip instructions)	Skip patterns were simplified by the removal of some questions in the survey (this was also necessary to decrease survey length and minimize burden). Additional navigation arrows were inserted next to some answer choices to direct respondents' attention to skip instructions.
Comprehension problems with some survey terminology (e.g., offender, dwelling, evidence)	A definition for "offender" (the person who committed the crime) was inserted in several questions. "Dwelling" was replaced by "home." "Evidence" was avoided and instead a descriptive approach (e.g., "How could you tell" instead of "What was the evidence?") was taken.
Difficulty reporting exact age of household members	A categorical variable with pre-coded response choices replaced the open-ended age variable. With the removal of the household roster, age was only captured for the mail survey respondent.
Difficulty reporting annual household income	To clarify that the question was seeking annual rather than weekly or monthly income, the first two response options (less than \$4,999 and \$5,000-\$9,999) were combined into one category (less than \$10,000). Also, the phrase "in the past 12 months" was underlined for emphasis.
Problems in keeping track of specific crime incident being discussed	Questions related to crime "series" were modified to more closely mirror the wording and placement of those in the CAPI and CATI instruments. Questions about the number of each type of crime were added to follow each gate question in the Screener. Each individual page of the CIR was also labeled with "Incident 1," "Incident 1 (continued)," etc.
Overall length of survey instruments/number of questions	The length of the mail survey instrument was reduced by 5 pages as a result of the removal of the household roster from the Screener and a number of questions from the CIR, including detailed questions about the characteristics of the offender (e.g., in a gang, drinking or on drugs), injuries or hospitalizations resulting from the crime, steps taken to protect self or property during the crime, and presence of others during the crime.
Clarification/Refinement of question text and/or response options	Response options were collapsed into fewer categories in some items. For example, "rape," "attempted rape," and "sexual assault" were combined into one response option, as were "purse" and "wallet." Three questions about the relationship of the offender to the respondent were collapsed into one item, as were three questions about contact with authority.

### 3. Phase 1 Cognitive Test Activities

The Phase 1 cognitive testing activities were iterative in nature, with refinements made to the survey instrument based on respondent feedback and consultation with BJS, and retesting of revised items occurring with new respondents. The goal of the testing was to evaluate:

1. Respondent reactions to, and effectiveness of, alternative wording and formatting of some questions, including the household roster,<sup>1</sup> age, and crime series questions;
2. Respondent reactions to, and effectiveness of, simplified terminology and definitions for problematic concepts like “dwelling” or “offender;”
3. Effectiveness of simplified skip patterns and instructions, including use of directional arrows;
4. Respondent burden in completing a further streamlined and shortened instrument;
5. How respondents report on different kinds of crimes (e.g., theft, assault) that occurred at the same time;
6. How respondents report on multiple incidents of the same kind of crime occurring on different dates (e.g., 2 thefts); and
7. How respondents report on a series of crimes, that is, more than 5 crimes that are similar in nature and cannot be recalled in enough detail to be distinguished from one another (e.g., domestic abuse).

To achieve cognitive test goals 1–3, the structured interview guide for the cognitive test included specific probes asking about the respondent’s understanding of select terms in the survey and whether respondents noticed the instructions or the skip instructions. Additionally, the interviewer collect observation data that indicated the frequency with which the respondent skipped or missed a question that should have been answered, skipped to the wrong item on the paper form, or hesitated or seemed confused by a particular question or instruction.

This information was used to identify specific questions or survey instructions that required probing by the interviewer or further revision and testing. To assess respondent burden (cognitive test goal 4), interviewers timed respondents on how long it took to complete each section of the questionnaire, including the Screener and each CIR. The timing data was used to consult with BJS on the necessity of further reductions to the mail survey length and complexity to reduce burden for the Phase 2 field test.

To achieve cognitive test goals 5–7, the interviewers went over the crime reports and specifically probed respondents on their understanding of how they should handle specific scenarios, including: (1) several different types of crimes that occurred at the same time (e.g.,

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<sup>1</sup> Even though the household roster was removed from the mail instrument and the household enumeration will occur during the CAPI/CATI interview with the household respondent, we tested the household roster as a separate instrument in case it needs to be implemented in subsequent waves of data collection when the focus is on self-administered modes.



robbery and assault); (2) multiple incidents of the same type of crime (e.g., 2 thefts) and how they determined which one to discuss in each CIR; and (3) how to report on crimes that occur frequently and cannot be distinguished from one another (e.g., a crime series, such as partner violence). The information was used to determine if refinements or additions to survey instructions were needed as the respondent moves from the Screener questions to the first CIR, or from one CIR to the next.

An additional goal of the cognitive test was to assess how the improved household roster would work in a self-administered environment and whether respondents would be willing to provide their personal demographic information and that of other household members. Participants were asked to complete the household roster as a separate form and probed on their (1) willingness to provide such information in a mail questionnaire, and (2) any possible problems they encountered when filling out the form. Interviewers kept a separate record of the time required to complete the roster to assess burden.

As described above, the metrics that were used to evaluate the instrument consist of direct observations and the respondent's answers to the probing questions in the cognitive interview guide. The observational data were captured at the question level and included:

- The time required to complete the Screener and each CIR (cognitive test goal 4)
- The items where the respondent hesitated or appeared to have trouble answering the question (cognitive test goals 1, 2, 3)
- The items where the respondent changed his/her answer (cognitive test goals 1, 2, 3)
- The items where the respondent struggled with navigation, such as following a skip instruction (cognitive test goal 3)
- The items left blank by the respondent that should have been answered (cognitive test goal 3; determined after interview completion by review of completed paper survey)

During the cognitive interviews, the observational data were used by the interviewer to identify which specific survey questions or instructions are problematic and should be probed in detail. Information then obtained from the respondents directly, in response to the interviewer's questions, were used to evaluate: (1) the effectiveness of specific revisions to the question or response choice wording; (2) the decision-making process used in navigating from item to item, including the visibility and understanding of instructions on the paper form; and (3) awareness and understanding of the purpose of some design features, such as the header at the top of each CIR page or the instruction boxes. Goals 5–7 are address through direct questioning of the respondent about his/her experiences in the survey and cognitive thought processes.

Phase 1 testing involved two rounds of cognitive interviews, conducted between June 16, 2011 and August 4, 2011. As in the preliminary testing, interviews were conducted at RTI's main campus by survey methodologists experienced in cognitive interviewing methods. Participant recruitment was carried out by RTI using advertisements placed on Craig's List for the Raleigh-Durham, NC, area and in RTI internal classifieds, and through postings at local public health departments, domestic violence shelters, and other similar locations. Interested candidates were screened to determine their eligibility for the cognitive interview and in an effort to recruit a diverse mix of participants. RTI staff and their family members were not eligible to participate.

Additionally, persons who had not experienced a crime in the past 6 months, were under age 18, or did not speak English were excluded.

### **3.1 Round 1 Cognitive Testing**

The Phase 1 cognitive test protocol mirrored that of the preliminary assessment including participant recruiting and screening procedures, informed consent procedures, and use of a guided think-aloud process to gauge respondent reactions to specific elements of the revised survey instrument. The first round of testing (Round 1) was conducted with 7 participants. The interviews averaged 81 minutes and included a review of a number of questionnaire items, including changes that were introduced after the preliminary cognitive assessment. The Screener portion of the survey averaged 6 minutes; while the first CIR took 9 minutes to complete. The average length for the subsequent CIRs was much less, about 3 minutes among respondents who experienced more than one crime. However, it is important to note that this average is based on only two respondents who were confused about where to report their crimes and tried to do so in CIR1. All cognitive interview participants received \$40 cash as compensation for their time.

Overall, respondents were able to navigate through the revised instrument relatively well. Some skip instructions (especially those associated with individual response options) were not as obvious as others, and more often participants committed errors of commission (answering an unnecessary item) rather than omission (skipping an item in error). Terms that were found problematic in the preliminary assessment and revised for Phase 1 testing were not found to be problematic in this round of testing. Additionally, no one seemed to hesitate when answering the survey questions and those who took longer made sure to read every single word. Respondents were found to have very good memories of their crime experiences – what happened, when, who were the offenders, etc.

No response changes were observed during the self-administration; however, many respondents wanted to change their answers to the “how many times” questions in the Screener during the think-aloud part of the interview as the interviewers probed to determine the number of unique incidents that had been experienced. In the CIR section of the instrument, most respondents noticed the header added to each CIR, but were confused about which crimes to describe in the first CIR and whether and how to fit all of their crime experiences into the first CIR.

The major problems identified during Round 1 cognitive testing are summarized below:

- The screener gate questions, asking if respondents had experienced a particular crime, were perceived unrelated to the follow up questions, asking how many times such crimes had occurred during the past 6 months;
- Overall, the idea of a crime “incident” was not well understood. Respondents double-counted crime experiences in the Screener. In fact, it seemed as if the Screener was perceived as a check list and participants did not notice the instructions to exclude crimes they had already reported in previous questions. Participants did not think in terms of “incidents,” that is, considering all the types of crimes they might have experienced at one time during one incident. Instead, in a check list fashion, they wanted to check every type of crime they had experienced, even if it took place at the same time as something they had already reported in a previous question.
- Participants felt mentally unprepared for the CIRs that were to come. Most who experienced more than one crime tried to report everything they had experienced in the

first CIR as they did not know another one was coming, or were confused about which crime they should be describing;

- Some Screener instructions that used the word “reported” were misinterpreted by respondents to mean “reported to the police”;
- The question series from the CIR about stolen purse or wallet were found confusing – participants had a hard time following the instruction boxes;
- Overall, respondents seemed to focus only on 2-3 key words in the Screener questions and then either assume they knew what the question was asking or “make up” the question in their heads. Not reading the entire question might explain why some crimes were double-counted and the reference period not considered;
- In Screener question 4a, the words “threats” and “thefts” were missed on several occasions, because “attacks” was placed first;
- Most respondents were able to follow the skip logic, but not consistently. In general, skips placed in Instruction boxes were evident to respondents; however, some skips routing off of individual survey answers were not apparent or followed.

We also tested the household roster with subset of the cognitive interview participants. As modifications to the SCV study design resulted in the household roster being offered only at Wave 1 via CATI and CAPI, the roster items were removed from the draft mail survey instrument. However, in light of issues identified during the preliminary assessment of the items, we conducted a small test of a stand-alone version of the roster with 3 Round 1 interview participants. The roster assessment was limited to a smaller number of participants as a result of time constraints during the interview or participant’s living situations<sup>2</sup>. Two of the three roster respondents did not live with another adult and did not experience any problems in answering the questions or providing information about themselves. Moreover, when probed hypothetically as to whether they would be willing and able to provide the roster information about others living in their household, both provided confirmatory responses. The roster respondent who did live with another adult also did not have any concerns about providing information about that person. All three respondents took about ½ minute to complete the roster.

In response to the Round 1 test findings, a second round of cognitive testing (Round 2) was planned. Exhibit 2 summarizes the mail survey revisions resulting from the Round 1 experience.

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<sup>2</sup> One respondent reported he was living in a homeless shelter, so the household roster was not administered.

**Exhibit 2. Summary of Mail Survey Revisions Resulting from Round 1 Cognitive Test Findings**

Round 1 Cognitive Test Findings	Resulting Mail Survey Revisions
Screener gate questions not perceived as related to follow-up count questions	Wording of the follow-up count questions revised to exactly match the terminology used in the gate questions. Bracketed directional arrows were added in an effort to visibly link the gate and follow-up questions, with the follow-up questions slightly indented under their gate items.
Concept of crime “incident” not understood, leading to double counting of events within the Screener	The 6-month reference period was reintroduced in the follow up questions (“How many times?”) as some participants reported on life-time crimes. Capitalized italics were used for instructions that reminded respondents to exclude any crimes reported in previous questions.
Respondents not mentally prepared for CIRs, showing confusion about what to include in the first CIR	To help prepare respondents for each CIR, definitions of “crime incident” and “household”, as well as a reminder about the 6-month reference period, were added to the first page of the questionnaire. Instructions were also added at the beginning of each CIR on how to think about “crime incidents.” The response box where respondents describe what happened during the crime incident was moved from the end of the CIR to the very beginning in an effort to anchor responses.
Some Screener instructions that used the word “reported” were misinterpreted by respondents to mean “reported to the police.”	Instructions removed or reworded to eliminate use of word “reported”
The CIR question series about stolen purse or wallet was found confusing; respondents had a hard time following the Instruction boxes.	The Instruction box between the CIR questions related to stolen purse, cash or wallet was removed to simplify the question flow and the words “if any” were added to the question asking about the value of the stolen cash, purse or wallet.
Respondents tended to focus only on 2-3 key words in the Screener questions and did not read the entire item, missing key information (e.g., reference period) and potentially leading to double-counting of events.	The 6-month reference period was reintroduced in the follow up questions as some participants reported on life-time crimes. Capitalized italics were used for instructions that reminded respondents to exclude any crimes reported in previous questions.
In Screener question 4a, the words “threats” and “thefts” were missed on several occasions, because “attacks” was placed first.	The words “attack”, “threat” and “theft” were underlined for better visibility.
Respondents could not consistently follow skip logic for all items.	Skip instructions reformatted for some items for greater consistency and increased visibility. Individual skip instructions were placed in white background ovals to make them consistent with overall question skip instructions.

**3.2 Round 2 Cognitive Testing**

The Round 2 cognitive test protocol mirrored that of Round 1, including participant recruitment procedures, informed consent procedures, and use of a guided think-aloud process to evaluate respondent reactions to the revised mail survey instrument. Eight participants took

part in Round 2 of the cognitive test. The interviews averaged 70 minutes and focused primarily on changes necessitated after Round 1. The Screener portion of the survey averaged 8 minutes; while the first CIR took 10 minutes to complete (the average length for the subsequent CIRs was 9 minutes for CIR2 and 7 minutes for CIR3 among respondents who experienced more than one crime).

The major findings from the Round 2 cognitive test are summarized below:

- Despite the effort to graphically (and visually) convey the relationship between each Screener gate question and the associated follow-up (count) question, all but one participant did not perceive the questions as related;
- Double-counting of crimes in the Screener continued to be an issue. Even though some respondents acknowledged reading the instructions not to count anything they had already included in previous questions, they still felt they wanted to put every crime on paper, even if multiple types of crimes happened in one incident. As in Round 1, respondents tended to treat the Screener items as a check list, checking things off as they went along regardless of whether they had happened at the same time as something previously reported;
- Respondents found some Screener questions to be redundant (e.g., multiple items about theft) and suggested that some could be combined;
- Even though we administered the household questions to everyone, most respondents were thinking of only their own personal experiences only when answering about crimes;
- As in Round 1, participants did not seem to read the Screener questions entirely – they commented that the questions were too long and complicated;
- In contrast, respondents found the CIR easy to fill out. Moving the crime description response box to the beginning of the CIR proved to be a good strategy to anchor respondents and help them keep track of the crime and time period about which they were answering. Improvements to the format of skip instructions were also effective.
- The change to the question series related to stolen cash, purse or wallet seemed to work well – no one expressed confusion in answering these questions or navigating through the routing instructions;
- Overall length of the questionnaire was found intimidating. Furthermore, participants perceived the Screener much harder than the CIR.

We also tested the household roster with 4 cognitive participants, 2 of whom lived with at least one adult household member. None of the participants had difficulty completing the roster or expressed concern about providing such information in a mail survey. Consistent with Round 1, the household roster took about ½ minute to complete.

#### **4. Overall Findings and Conclusions from the Mail Survey Cognitive Testing Activities**

Careful consideration was given to the results of the preliminary cognitive assessment with 9 respondents and to the 15 cognitive interviews conducted across Rounds 1 and 2. A number of improvement strategies were found to be effective during testing. For example, use of a consistent style of directional arrows and white text ovals for skip instructions at both the question- and response option-level decreased navigation errors during self-administration. Additionally, changes in the wording of some items removed confusion about key terminology, such as “offender” and “dwelling unit.” Collapsing of some response options and survey items simplified the response and navigation task. Finally, allowing respondents to describe the crime incident they were responding about at the beginning of each CIR rather than at the end

provided an effective means of anchoring the respondents and keeping them focused on the incident being discussed.

In spite of these improvements, several critical challenges could not be easily overcome in spite of several iterations of instrument refinement and testing. Specifically, the Screener questions were perceived to be too long, complex, and repetitive in all rounds of testing. Respondents did not read the entire question and often missed key pieces of information, including the survey reference period, instructions to exclude crimes previously mentioned, or nuances in the question itself related to the location of the crime or the person responsible (e.g., crimes committed by “someone you know”). In spite of additional formatting, rewording, and use of indentation, very few respondents understood that the follow-up count questions in the Screener were associated with the gate question. Instead, they viewed the count questions as a new or different question entirely. Finally, in completing the Screener, respondents tended to view all of the gate questions as a check list rather than as a series of cues to facilitate recall of all crime incidents experienced during the reference period. As such, even if the respondent experienced only one crime incident involving multiple types of crime (e.g., a break-in that included the theft of several items and some form of assault), they answered “yes” to each individual gate question about “break-in,” “theft” and “assault”, leading to over-counting of incidents within the Screener. This problem then led to confusion as the respondent moved from the Screener to the first CIR. They did not know which crime or crimes to describe in the first CIR and often tried to cover every incident in the first CIR. Only with the assistance of the interviewer did respondents with a multi-crime incident or with multiple crime incidents work through this issue and successfully proceed through the CIRs.

Based on these findings, we believe considerable reworking of the survey instrument, including rewording and restructuring of items in the Screener and possibly the CIR, is needed to arrive at a mail survey that can be effectively completed in a paper-and-pencil, self-administration format for the NCVS. The current instrument requires interviewer (or, for Web, computer) intervention and assistance to ensure respondents understand how to think about, count, and report on the crime incidents they experienced during the reference period. Moreover, consideration should be given to further reducing the length and complexity of the survey instrument as respondents found it to be very long and intimidating. Because these issues cannot be resolved without further, more extensive questionnaire redesign and testing, we recommend that BJS eliminate the mail survey option from the SCV experimental design.

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*Appendix A: SCV Mail Survey Instrument*

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*Appendix B: SCV Household Roster*

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*Appendix C: SCV Mail Survey Cognitive  
Interview Guide*

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