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AUTHOR Nolin, Mary Jo; Chandler, Kathryn
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ABSTRACT

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics which has as its mission the collection and publication of data on the condition of education in the United States. The NHES provides descriptive data through a random digit dialed telephone survey of the noninstitutionalized civilian population of the United States. Approximately 60,000 households are screened for each administration, and individuals who meet the study criteria are sampled for more detailed or extended interviews. Data quality is a central issue for the NHES. Cognitive laboratory research, one of the many efforts to reduce nonsampling error in surveys, draws on the theories and methods of cognitive psychology. Concurrent and delayed methods are used in cognitive laboratory research procedures that can include individual interviews and focus groups. Cognitive laboratory activities are typically audiotaped or videotaped to provide a record of the research. Several examples of the use of cognitive laboratory research in the conduct of the NHES are given. These examples illustrate how taping and analysis of live interviews measured interviewer and respondent behavior during data collection and contributed to understanding words and items that could cause difficulty. Three appendixes present a moderator's topic guide for parent groups, a similar guide for adolescent groups, and a form for coding interviewer-respondent interactions. (Contains 1 appendix table and 23 references.) (SLD)

NATIONAL CENTER FOR EDUCATION STATISTICS

Technical Report **September 1996**

National Household Education Survey

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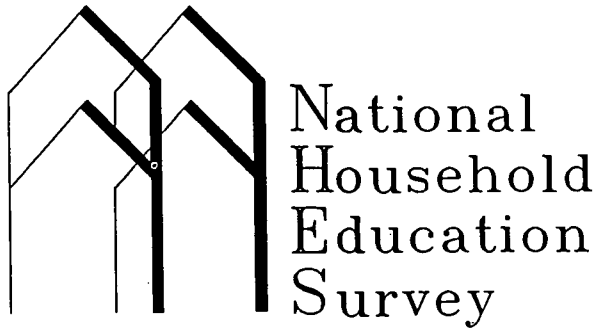

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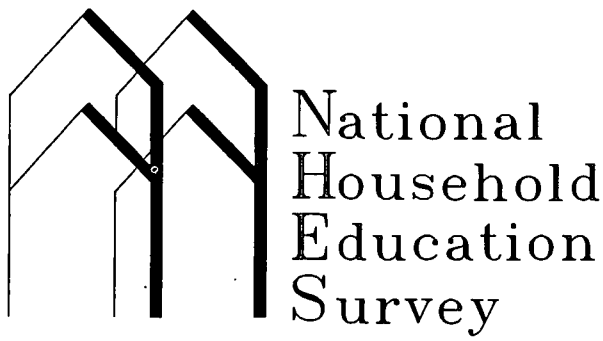

Mary Jo Nolin
Westat, Inc.

Kathryn Chandler
National Center for Education Statistics

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Contact:
Kathryn Chandler
(202) 219–1767

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Background

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics (NCES), which has as its legislative mission the collection and publication of data on the condition of education in the Nation. The NHES is specifically designed to support this mission by providing information on those educational issues that are best addressed by contacting households rather than schools or other educational institutions. The NHES provides descriptive data on the educational activities of the U.S. population and offers policymakers, researchers, and educators a variety of statistics on the condition of education in the United States.

The NHES is a telephone survey of the noninstitutionalized civilian population of the United States. Households are selected for the survey using random digit dialing (RDD) methods, and data are collected using computer-assisted telephone interviewing (CATI) procedures. Approximately 60,000 households are screened for each administration, and individuals within households who meet predetermined criteria are sampled for more detailed or extended interviews. The data are weighted to permit estimates of the entire population. The NHES survey for a given year typically consists of a Screener, which collects household composition and demographic data, and extended interviews on two substantive components addressing education-related topics.

The primary purpose of the NHES is to conduct repeated measurements of the same phenomena at different points in time, although one-time surveys on topics of interest to the Department of Education may also be conducted. Throughout its history, the NHES has collected data in ways that permit estimates to be tracked across time. This includes repeating topical components on a rotating basis in order to provide comparative data across survey years. In addition, each administration of the NHES has benefited from experiences with previous cycles, resulting in enhancements to the survey procedures and content. Thus, while the survey affords the opportunity for tracking phenomena across time, it is also dynamic in addressing new issues and including conceptual and methodological refinements.

A new design feature of the NHES program implemented in the NHES:96 is the collection of demographic and educational information on members of all screened households, rather than just those households potentially eligible for a topical component. In addition, this expanded screening feature includes a brief set of questions on an issue of interest to education program administrators or policymakers. The total Screener sample size is sufficient to produce state estimates of household characteristics for the NHES:96.

Full-scale implementations of the NHES have been conducted in 1991, 1993, 1995, and 1996. Topics addressed by the NHES:91 were early childhood education and adult education. The NHES:93 collected information about school readiness and school safety and discipline. The 1991 components were repeated for the NHES:95, addressing early childhood program participation and adult education. Both components underwent substantial redesign to incorporate new issues and develop new measurement approaches. In the NHES:96, the topical components are parent/family involvement in education and civic involvement. The NHES:96 expanded screening feature includes a set of questions on public library use.

In addition to its topical components, the NHES system has also included a number of methodological investigations. These have resulted in technical reports and working papers covering diverse topics such as telephone undercoverage bias, proxy reporting, and sampling methods. This series of technical reports and working papers, which includes this report, provides valuable information on ways of improving the NHES.

This report describes cognitive laboratory research and analysis of taped interviews in the NHES. The description of these data quality activities is illustrated with selected examples from survey components in the NHES:91 and the NHES:93. The report is intended to give an overview of these methods as they are used in a major education data collection, not to describe the results of the activities in detail.

Overview of Data Quality Activities in the NHES

Many social scientists rely on data from large-scale surveys to conduct their research, and it is assumed that the data are accurate and reliable. However, the quality of survey data is affected by both sampling and nonsampling error. Substantial research has been conducted to measure and to find ways of reducing sampling error, error that results from surveying only a portion of the inference population. Other research has been conducted to find ways of reducing nonsampling error, error that arises from behavior of the respondent or the interviewer or both. In order to reduce this type of error, researchers expend considerable effort to 1) design questions that are clear and easily comprehensible to the respondent, 2) reduce nonresponse among sampled persons, and 3) train interviewers to ensure consistency in the way that questions are asked (Groves 1989, 1-6).

Data quality is a central issue for the NHES, and care is taken at each stage of the survey design and data collection process to secure high quality data. Several methods have been used in the NHES to reduce nonsampling error by increasing the comprehensibility of survey questions and maximizing interviewer consistency. Each method elicits different information and suggests specific means of improving the survey (Presser and Blair 1994). For instance, for some survey topics, cognitive research explores the salience of those topics with participants drawn from the intended population of interest. Then, drafts of NHES questionnaire items are presented for review and comment to Technical Review Panels composed of both methodological experts and experts in the content areas from which the survey topics have been drawn. Cognitive research consisting of intensive interviews and focus groups is conducted after survey items are developed, and changes are made to the instruments based on the findings from this research. Following the conclusion of cognitive laboratory research, the instruments are programmed for computer administration, and one or more pretests are conducted using live, computer-assisted telephone interviews (CATI). These efforts result in adjustments to the interview instruments. Pretest results come from both the actual responses and from what is learned about respondent comprehension and respondent-interviewer interaction through extensive monitoring by project staff and in-depth debriefings of interviewers.

During data collection, interviews are regularly monitored by project staff and Telephone Research Center staff, and interviewers receive quick and specific feedback on their performance. In addition, a small number of interviews have been recorded, and staff have analyzed the observed interviewer-behavior interaction. These activities are used in conjunction with the results of a reinterview of a subsample of the respondents and a comparison of the NHES findings with other surveys to investigate and offer probable explanations for any unexpected results and to improve future administrations of the survey (Brick and West 1992; Brick, Rizzo, and Wernimont forthcoming; Brick, Collins, Nolin, and Davies forthcoming).

Two data quality activities of the NHES, cognitive laboratory research and analysis of recorded interviews, are the focus of this report. Cognitive laboratory research plays a key role during the design of each NHES survey. This research utilizes the methods of cognitive psychology to increase understanding of the ways that respondents comprehend survey instructions and questions, recall requested information, and respond to the influence of word and question order. It has been used in the

NHES to explore the feasibility of potential survey topics, to assess the reliability of classes of respondents, and to test questionnaires in order to reduce measurement error. Maximizing the clarity and conciseness of the questions is a particular concern for a survey like the NHES, in which a random sample of persons is surveyed without any previous introduction to the study. Respondents are typically unfamiliar with surveys, some have relatively low educational attainment, and all possess perceptions unique to their own social experience. An understanding of respondents' general perceptions of the survey topics and the salience of the issues being explored, as well as knowledge about the strategies that respondents are likely to use to answer survey questions, has the potential of reducing measurement error. So also does creating an interview context in which respondents are likely to respond accurately in terms of their own experience (Schwartz 1995).

The analysis of recorded interviews conducted during the NHES:91 and the NHES:93 has provided a useful assessment of data quality. During data collection for those surveys, a limited number of interviews were tape-recorded and later analyzed to systematically assess the interview process and to evaluate respondent comprehension during the interview. A different method of analysis was used each year. For the NHES:91, tapes were analyzed for content; for the NHES:93, each interviewer-respondent interaction was coded.

Following a brief account of the emergence of cognitive laboratory research as a tool for survey researchers and a description of cognitive laboratory methods and procedures, the application of these procedures in the NHES:91 and NHES:93 is described. An account of the assessment of interviews recorded during data collection in the NHES:91 and NHES:93 is then presented.

Overview of Cognitive Laboratory Research

Cognitive laboratory research, one of the many efforts to reduce nonsampling error in surveys, draws on the theories and methods of cognitive psychology. Collaboration between survey researchers and cognitive psychologists began in 1978. To a great extent this collaboration was sponsored and funded by government agencies in the United States, the United Kingdom, and West Germany in order to improve the quality of the survey data that served as the basis for policy decisions. Cognitive psychologists were motivated to join in the interdisciplinary effort because they were provided with the opportunity to study cognitive processes in a natural setting rather than in the artificial setting of the laboratory (Jobe and Mingay 1991). Examples of this research (as cited by Jobe and Mingay) include research on autobiographical memory, cognitive interviewing techniques, experiential memory, the influence of response alternatives on responses, memory for dates and events, question comprehension, question ordering and wording, and response order. Most of the research was published in the 1980s. According to Lessler, Tourangeau, and Salter (1989), despite government funding of early cognitive research, cognitive laboratory procedures were underutilized in survey research for Federal agencies. Their own program for investigating the cognitive aspects of survey methodology at the National Center for Health Statistics, described in Lessler, Bercini, et al. (1986) and Lessler, Tourangeau, and Salter (1989), was an exception. In this decade, however, more Federal studies have incorporated cognitive laboratory research (see, for example, Bates and DeMaio 1990; Campenelli et al. 1991; Cantor and Edwards 1992; Cantor et al., 1995; Dippo and Norwood 1992; Jenkins, Ciochetto, and Davis 1992; Jenkins 1992). Cognitive laboratory research in the NHES has been part of this effort.

In the next sections, cognitive laboratory methods are discussed first, followed by a description of the

procedures that are used in combination with those methods, and then by a brief account of how data from cognitive laboratory research are analyzed.

Cognitive Laboratory Methods

Forsythe and Lessler (1991) provide a valuable classification of cognitive laboratory methods from which this summary is drawn. They differentiate the methods used in cognitive laboratory research along two dimensions: the timing of the cognitive tasks, and the level to which the respondent must attend to his or her cognitive processes in order to provide the information requested. Some methods are called concurrent methods because the cognitive tasks of providing information and articulating meaning and/or recall processes are performed at the same time. The respondent's attention is specifically directed to the response process at the same time he or she is required to retrieve and provide information. The respondent must not only respond to the question, but also talk about the mental steps involved in retrieving and sorting the requested information. Some cognitive laboratory methods are termed delayed because they involve cognitive tasks that the respondent performs after the process of retrieving and providing information. That is, the respondent first provides the information and then, shortly afterwards or when a somewhat longer period of time has elapsed, the respondent reports on his or her cognitive processes. Selection of a concurrent or delayed method is guided by the specific goals of the research.

Two **concurrent methods**, concurrent think-alouds and concurrent probing, are frequently used in cognitive laboratory research. The **concurrent think-aloud** method requires the respondent to verbalize his or her thoughts spontaneously while answering the interview questions. This method is based on protocol analysis (see Ericsson and Simon 1980 and Ericsson and Irwin 1984) in which participants are asked to think aloud as they solve a problem. When this approach is used in cognitive laboratories to test a questionnaire, respondents are asked to think aloud as they answer each question in order to reveal the strategies they use to recall the information. They talk through the steps they take to produce an answer while they are producing the answer. For example, when asked a question that requires recall over an extended period, a respondent might think in terms of months or seasons, and that would become apparent as he or she spoke while retrieving the information. (For example, a respondent might say, "Let's see, in June we went to the beach, and I wasn't taking courses then. I must have started in July.") This activity is not an easy one for many respondents because the thoughts that they are asked to verbalize are usually not expressed aloud. Typically, we do not think about "how we think" when generating responses to questions, and some respondents do not articulate their thoughts easily, even when they are attending to them. A variant on the think-aloud method, in which the researcher takes a more directive role, is the **concurrent probe**. Immediately following a response, the participant is asked about some aspect of the question or response in order to elicit specific and detailed information on response strategy.

Cognitive laboratories also use delayed, or retrospective, methods. **Delayed methods** tap information about respondent knowledge, comprehension, and recall, as well as general perceptions about survey items that may affect motivation, particularly those that are formed over time (Forsythe and Lessler 1991). These methods call for the administration of the survey under conditions similar to those encountered during the actual data collection. Then, after all questions are answered, information about the survey and the response process is elicited. The researcher may use either nondirective or directive **retrospective probes** to draw out this information. For example, a researcher may refer to a particular answer and ask the respondent to **think-aloud retrospectively**, explain what he or she was thinking when responding. Or, in a more directive probe, the researcher may refer to a particular term that the respondent used and ask for the respondent's definition of that term in more detail. The elapsed time between administration of the interview and the

procedures to measure cognitive processes varies from immediately following administration of the survey to a few days. In the former instance, information requested of the respondent resides in short-term memory and is generally easily retrievable. In the latter case, the time interval requires the respondent to reconstruct what he or she was thinking at the time the question was asked. It also permits access to opinions regarding the survey that have been formed over the time between asking the question and probing for more information.

Both concurrent and delayed methods are used in cognitive laboratory research for the NHES. Concurrent methods are most often employed in testing questionnaire items. Delayed methods are most commonly used in the early stages of the design of an NHES survey to explore research topics and determine the appropriate respondents for those topics. Delayed methods may also be used to test questionnaire items.

Cognitive Laboratory Procedures

Concurrent and delayed methods can be employed with different cognitive laboratory procedures, creating an array of tools for the researcher (table 1). The procedures commonly used are individual, in-depth interviews and focus groups. In the NHES, focus groups have been used during the earliest stages of survey design to assess the feasibility of potential research topics and the suitability of a class or classes of respondents, given the topic. In-depth face-to-face interviews and focus groups have been used to evaluate the clarity and efficacy of questionnaire items and to improve and test versions of the instruments. The following sections describe interviews and focus groups and the specific cognitive laboratory methods typically used with these procedures.

Individual Interviews

Individual interviews are an important part of cognitive laboratory research. During cognitive interviews, the researcher is able to interact with one participant at a time, and give his or her full attention to the information offered by the participant. This procedure affords the researcher the flexibility to adapt the methodology to the participant and to pursue valuable and perhaps unanticipated lines of inquiry. Both concurrent and delayed cognitive laboratory methods can be used with individual interviews.

Cognitive laboratory activities to test NHES survey items usually include concurrent think-aloud interviews in which respondents verbalize their response strategies as they answer each question. The absence of intervention by the interviewer permits unexpected information to emerge. However, the concurrent think-aloud method can influence the responses that are obtained. Because the respondent is attending to the process of retrieving information and deciding upon response

Table 1.– Cognitive laboratory techniques used in the NHES

	Methods	
Procedures	Concurrent	Delayed
Individual interviews	Concurrent think-aloud Concurrent probing	Retrospective think-aloud Retrospective probing
Group discussion		Focus group

strategies, he or she may be more careful in searching for accurate information than a survey respondent under typical interviewing conditions.

Although respondents are instructed, in the think-aloud method prior to administration of the questionnaire, the procedure is awkward for some respondents because they must consider both the response and the strategy for obtaining the response. Some respondents are simply unable to report on their response strategies while answering questions. In addition, because some respondents focus intently on generalizing an out-loud response to a question, they may have difficulty focusing on the subsequent questions, which can reduce the accuracy of their self-reporting.

In these cases, another concurrent method, the concurrent probe, may be used. During the interview, the respondent answers questions without having to attend to retrieval processes at the same time. However, just after a response is given, the interviewer probes to ascertain details of the response process including relevant information about knowledge and motivation to respond.

Delayed cognitive methods may also be used in conjunction with individual interviews. In these interviews, after the respondent has answered all questions, he or she is debriefed about his or her responses. Usually certain questions or groups of questions are targeted for debriefing. Delayed methods used with interviews can be nondirective, as in the retrospective think-aloud technique in which the respondent is simply asked to recall and state what were his or her thoughts when responding to particular questions. Retrospective probing is more structured; information about specific aspects of content and time domains is elicited by the researcher. Questions about the meaning of terms, the techniques used to recall information, or reference periods for time-related questions might be asked. The respondent's assessment of the accuracy of the original responses can also be obtained.

Focus Groups

Focus groups are a cognitive laboratory method that can generate valuable insight on respondent comprehension, recall, and motivation to answer survey items. In the NHES, they are a means of exploring potential survey topics, establishing the appropriate respondents to the surveys, and evaluating drafts of interviews. First used in social science research over 30 years ago, focus groups are small groups of 6 to 10 individuals who are brought together to react to a stimulus situation or discuss a particular issue or set of issues (see Merton, Fiske, and Kendall 1956 for a discussion of the early use of focus groups). Focus group participants are selected according to criteria determined by the research topic and the research goals. Groups are often composed of participants who share many sociodemographic characteristics because interacting with others who are similar can encourage self-disclosure (Merton, Fiske, and Kendall 1956, 137-138). Alternatively, especially when the number of groups to be conducted on a topic is limited, conducting groups homogenous on several variables (e.g., older white males, younger white males, older black males, older white females, etc.) may not be feasible. In such instances, diversity on sociodemographic variables is accepted, and homogeneity with regard to the particular research topic can be sought. For example, for a study in which it is anticipated that experience will vary by the grade of the student, one might want to include youth from a narrow grade range but who attend public and private schools, who are black, white, and Hispanic, and who live in urban and suburban areas.

Protocols designed with the stage of development of the survey and the particular research purpose in mind are created to guide focus group discussions. They consist of unstructured, semistructured, or structured questions and probes. The intent is to capture a range of responses from participants, to elicit information that is as specific as possible, to encourage participants to contribute perceptions that are both cognitively and emotionally meaningful, and to learn about the personal context from which their responses are drawn (Merton, Fiske, and Kendall 1956). For example, protocols for focus groups conducted for exploratory research will contain open-ended questions to encourage the respondents to

voice their own opinions and perceptions as unconstrained as possible by the conceptualizations of the researchers. Protocols for focus groups conducted for the purpose of testing survey instruments may use more directive techniques specified by semistructured or structured questions. Typically, participants in these focus groups are prepared for the discussion by having the survey administered to them beforehand. The protocol is constructed to decompose responses and explore comprehension and time references. The focus group discussion encompasses thoughts participants have had in the period intervening between the interview and discussion, and elicits attitudes about the survey that may have developed over time.

Focus groups are led by trained moderators who direct the discussion but allow the respondents to voice their own opinions and perceptions about the survey. This method affords participants the benefit of group interaction. In exploratory research, group discussion can yield constructive information about respondents' general knowledge of survey topics and related issues and can help researchers to use familiar terms when designing questionnaire items. In groups conducted to test questionnaires, comments by some group members may help others recall thoughts and perceptions that occurred at the time they responded to the survey or encourage them to offer opinions about the survey. Because several respondents take part in the discussion simultaneously, focus groups offer researchers a labor- and time-efficient method of gathering qualitative data to improve survey content and reduce measurement error.

Focus groups have some limitations, however. Because several participants are involved in the task, the researcher must pay close attention to group process as well as to the research objective. Some participants may attempt to dominate the group, subvert the task, fulfill personal goals, or otherwise adhere to their own agenda. Alternatively, other participants may be swayed by group opinion or may be reluctant to divulge information in front of others that they would reveal to a researcher in an individual interview. Focus group participants must be assured of the confidentiality of their opinions, which are to be used for research purposes only. Focus group data, whether in the form of notes or video- or audiotapes of the proceedings, must be treated with extreme care by researchers to protect that confidentiality. Also, focus groups, like the other methods discussed here, do not yield findings that are generalizable to a larger population, so their results must always be interpreted with caution.

Analysis of Cognitive Laboratory Data

Cognitive laboratory activities are typically audiotaped or videotaped to provide a record of the research. Findings are drawn from content analysis of the tapes, or, in some instances, of transcriptions of the tapes. However, analysis of transcriptions cannot take the place of listening to or viewing the tapes or observing the sessions because the context of a person's remarks (tone of voice, posture, etc.) is also useful information. In addition to the tapes, data may be generated by notes taken by an observer during a focus group and notes recorded by the interviewer or focus group moderator immediately following the activity.

The specific analytical procedure used by the researcher depends upon the research goal. Data may be precisely coded, and words and phrases compared and contrasted in research conducted to generate conceptual categories, or the data may be subjected to a more general analytical search for major points. Data collected to assess comprehension, recall, and the sensitivity of questionnaire items can be examined for the range of answers, specificity of ideas, and patterns of response (Krueger 1988, 106-121). Although findings are often based upon responses that emerge repeatedly throughout the research, valuable insights can be generated by one comment made by a single research participant. Therefore, a search for key comments, not only patterns, is part of the analysis of cognitive laboratory data.

In the NHES, individual interviews are audiotaped, and focus groups are both audio- and videotaped. An observer also sits behind a one-way mirror and takes notes during the focus group. The interviewer or focus group moderator records his or her notes on the research immediately following the activity. Answers to the general questions that guide the research and are embedded in the protocol are drawn from reviewing the tapes and the notes of the observer and the interviewer or moderator. Recommendations are based on these findings.

Examples of Cognitive Laboratory Research Conducted for the NHES

Cognitive laboratory research has been conducted in the design phase of each NHES data collection, and the role of this research in the development of each survey has increased over time. The examples presented here are not intended to be comprehensive with regard to the issues explored in the cognitive laboratories, the procedures used during the design of each survey component, or the findings that emerged from the research. However, they illustrate ways that cognitive laboratory methods and procedures have been used to investigate various issues for different topical components with beneficial results for the overall data quality of the NHES.

Exploring the Feasibility of a Research Topic and the Appropriateness of Respondents: School Safety and Discipline

Cognitive laboratory research was undertaken to examine the feasibility of school safety and discipline as a topic for the NHES:93. Interest in School Safety and Discipline as a potential topic for the NHES intensified when this topic became one of the President's and Governors' National Education Goals. While some data on student drug use, victimization, and teachers' perceptions of school safety were published (National Education Goals Panel 1991, 1992), there was a need for more data, not only on student victimization, but also on overall perception of the "learning environment" at school. In addition, NCES was interested in placing parents' and students' reports in context by gathering data on parent approval or disapproval of alcohol use by their children, the extent of parent support of school discipline policy, and certain school and neighborhood characteristics. Substantive experts agreed with the need for more data but thought that obstacles to collecting it might exist. There were concerns that parents may not pay much attention to issues related to safety at school, that students may not be reliable respondents because of their age, and that concepts used by educational policymakers and researchers would not be readily understood by parents and students.

Because of the open-ended format and the potential for new information to emerge from group interaction, focus groups were chosen as the appropriate methodology to explore the salience of the issues and parent and student comprehension of the concepts related to school safety and discipline. Professionals had identified areas related to safety and discipline in school for which data were needed. Small groups of 8 to 10 parents or students were brought together to discuss aspects of the topic and to test the ability of potential respondents to provide the data. The group format encouraged a range of opinions, with the comments of some members of the groups serving as stimuli for others.

Participants. During May and June of 1991, seven focus groups were conducted to test the feasibility of a School Safety and Discipline topical component for the NHES. All of the groups were conducted near the Washington, DC or Baltimore, Maryland, metropolitan areas. Participants were recruited through flyers posted in public places such as office buildings and grocery stores, and through an advertisement placed in a local newspaper in Gaithersburg, Maryland, a suburb approximately 35 minutes outside of Washington, D.C. Participants with experience in inner-city schools were recruited through a market research firm in Baltimore, Maryland. Volunteers were administered a brief screener so that participants could be selected according to specific characteristics that the included grade of student, type of school, race/ethnicity, and

parents' occupation. Four of the groups were composed of parents; one group of parents of students in grades 1 through 6, two of parents of students in grades 7 through 9, and one of parents of students in grades 10 through 12. Groups contained both mothers and fathers, but not two parents from the same family. In addition, three groups of students were conducted, two composed of students in grades 7 through 9, and one of students in grades 10 through 12. Five of the groups (three parent and two student groups) were conducted in Gaithersburg, and two (one parent and one student group) were conducted in Baltimore. The prior written consent of a parent was obtained for each student who participated in a focus group, and all participants, parents and students, gave written consent before the discussion began. Each of the participants was paid an honorarium.

The groups were racially and ethnically diverse, and respondents were from different socioeconomic levels as measured by occupation. Twenty-five of the parent participants and 18 of the youth participants were white, and 10 of the parents and 6 of the youth were black or Hispanic. Approximately half of the parent participants were in relatively low-wage occupations that did not require postsecondary education, for example, automobile salesman or maintenance worker. About half of the student participants came from households in which the highest occupation was also a relatively low-wage one. Mothers and fathers (from different families) participated, as did male and female students.

Protocols. Moderator's topic guides were developed to guide the focus group discussions (see Appendix A and Appendix B). They were organized around four broad topics: safety in the schools, alcohol and other drug use, alcohol and drug education, and school discipline policy.

The protocols contained both structured and unstructured questions and probes designed to elicit in-depth and personal discussion of each of the topics.

Findings. The focus groups demonstrated that school safety and discipline was a feasible topic for the NHES—one of great interest to both parents and students. Most parents held understandings of the key concepts consistent with those of the professionals who had been consulted in the earliest stage of the design. There were few differences between the suburban and urban groups with regard to level of awareness and concern about unsafe incidents at school, although urban parents and students regarded lack of safety at school as more prevalent and inevitable than did the others.

One of the points that the focus group research addressed was who would be appropriate respondents for this topical component. It was believed that safety and discipline could be of concern to parents and students at lower as well as higher grade levels; however, it had not been determined at what grade level parents began to focus on those issues. As intended, during the course of the focus group discussion, the meanings that the participants attached to safety and discipline in school emerged relatively unconstrained by the perceptions of researchers. The focus group composed of parents of elementary school students revealed a range of concern about safety issues linked to the age of the child. Parents of younger elementary school students, children in grades 1 through 3, tended to think about safety in terms of freedom from outside intruders who could gain access to the school and potentially harm their children. These parents were less concerned with serious disruption in the classroom, fights between students, and weapons and drugs in school. Parents with older elementary school children begin to anticipate the occurrence of unsafe conditions in schools and serious lack of discipline in the classrooms. As children entered the 4th, 5th, and 6th grades, the issues related to discipline, fighting, and even weapons in school become more salient for parents. Parents whose children were to enter middle school in 6th grade expressed more anxiety than parents of children who would remain in an elementary school through 8th grade, and parents of students in junior high (7th-9th grade) and high school (9th - 12th grade) saw the safety of their children from harm or threats of harm by other students as being of central concern.

The appropriate parent respondents for this survey would be those who were immediately concerned about safety and discipline at school as it was identified in the National Goals. Discussions in the focus groups established that parents of students in grades 6 through 12 were those parents; they would be the best respondents for a broad range of questions on safety and on such issues as drug availability and use. However, the emerging concerns of parents of younger students argued for including them in the survey population also. Their comments showed that they were beginning to look ahead to their children's middle or junior high school years. The focus group findings led to the decision to include parents of students in grades 3 through 5 as respondents for this survey component. Based on the findings that some subjects (e.g., alcohol and drugs or weapons at school) were not salient for this population, it was decided to administer to them a subset of questions focused on the safety issues most relevant to the parents of younger students, for example, classroom disruption and bullying.

It was hypothesized that parents do not necessarily have full information from their children or from other sources about disruption and violence in school, the availability of alcohol or other drugs, the school discipline policy, or the alcohol/other drug education at their child's school, and the focus group discussions supported this conjecture. Some parents reported consulting with a child after volunteering for the cognitive laboratory research, and thereby learning that some of their ideas about safety at school were inaccurate. Data from the students themselves would be potentially more accurate on some subjects; however, there was concern about the reliability of students, particularly younger students, as respondents.

Focus groups with students tested their ability to report on issues related to school safety and discipline. Students in high school were, as anticipated, knowledgeable about the full range of issues related to school safety and discipline, including alcohol and drugs and weapons at school. The focus groups also revealed that students in grades 7 and 8 were knowledgeable, and at least as concerned with their personal safety as were older students. In fact, the discussions with these students highlighted the problem of older students bullying younger students, a topic that was explicitly included in the survey because of this finding. None of the students who participated in the focus groups had difficulty understanding the concepts and terms linked to the topics of interest related to school safety. Although this round of cognitive laboratory research did not include 6th grade students, the retrospective reports of the 7th and 8th graders about their experiences as 6th graders and their apparent reliability as respondents suggested that students in grade 6 would also be appropriate respondents for this survey component. The other focus groups had revealed that this was the age that their parents' awareness of safety issues sharpened. Accordingly, the decision was made to include 6th through 12th grade students as survey respondents for the component on safety and discipline in school.

The focus groups also confirmed substantial differences in the perspectives of parents and students about their school, and in the information provided by parents and by students for this survey component. Youth were more informed about all aspects of safety and discipline at school than were their parents. Some youth commented that they did not like to worry their parents and so kept reports of unsafe incidents from them. As a result of this finding, the survey component was designed with identical wording of most of the questions about school safety so that analysts could compare parents' and children's responses. In addition, the focus group discussions suggested that both students and their parents judge the safety of their schools relative to the safety of their neighborhoods, so items were included measuring neighborhood safety that would provide a useful context for assessments of safety at school.

Testing Survey Instruments

Cognitive laboratory research has also been employed extensively in the design of instruments for the NHES. For example, it was used to test the survey instruments for the Early Childhood Education component of the NHES:91, and for both the School Readiness and the School Safety and Discipline components of the NHES:93. The purpose of the research was to reduce the incidence of measurement error in the NHES by examining whether the participants 1) understood the questionnaire items; 2) had the knowledge necessary to answer the questions; 3) were able to recall the information when asked; and 4) would be willing to answer all the questions, especially those that might elicit sensitive information. Individual interviews and focus groups were included in the cognitive laboratory research in each test to take advantage of the benefits of the two procedures. Interviews allowed the researchers to explore selected issues to some depth with one respondent at a time. Focus groups were intended to capture range more than depth. Guided by open-ended research questions contained in the protocol, they often produced valuable and unanticipated findings due to the interaction that took place among respondents. Some interviews used concurrent methods, both think-alouds and concurrent probing. Other interviews and the focus group discussions used retrospective probes.

Testing the NHES:91 Early Childhood Questionnaire

The Early Childhood component was designed to obtain information from parents about the care and education of their children age 3 through 8. It required parents to report on care arrangements and schooling over the course of several prior years, as well as on current arrangements. It also measured activities that parents might do with their children at home that would promote learning. There was concern about the ability of parents to recall details years later, and their willingness to report on their children and their family activities.

Two rounds of cognitive laboratory research were conducted to test the Early Childhood Education questionnaire for the NHES:91. The first round tested an initial version of the questionnaire, and the subsequent round tested the revised version. Each round consisted of six cognitive interviews and two focus groups. Prior to the focus groups, each participant was administered the interview over the telephone. Half of the interviews and one of the focus groups in each round were conducted with parents of preschool children; the other half of the activities were conducted with parents of children in kindergarten through grade 3. Respondents were recruited through day care providers in the Rockville, Maryland area, and through the personal networks of Westat employees in Gaithersburg and Frederick, Maryland. Each participant was paid an honorarium.

One of the primary purposes of the cognitive laboratory research was to test respondent comprehension of the terms used in the survey. The Early Childhood Education component of the NHES:91 focused on nonparental care arrangements and participation in preprimary programs as well as primary school programs. It was important to know how parents understood nonparental care, defined in the interview as a "child care arrangement in which care is provided by someone other than you or your spouse or partner." Following administration of the survey, participants in the first round of cognitive laboratory research were asked about their definitions of nonparental child care. Specific probes were used to determine whether respondents included certain arrangements, for example, care by a grandparent living in the home or a day camp that lasted for a short period in the summer. Other probes explored whether a parent distinguished between a nursery school and a day care with an educational component when asked about preschool.

In the initial version of the questionnaire, the section asking about child care arrangements began with a rather lengthy definition of nonparental care that named various types of arrangements. The cognitive laboratory research revealed that respondents did not attend to the details of the definition, and were not always reporting care arrangements accurately. Following the definition was a general query about any kind of nonparental care. This research indicated that it is more appropriate to ask first about specific types of nonparental care or early childhood programs rather than asking a general question. The findings suggested that a shorter definition would more appropriately cue the respondent. Because participants in the cognitive laboratory research did not always count care by a relative if there was no charge for that care, a specification was added to the introductory definition indicating that they should report any regular, nonparental care given by relatives or nonrelatives whether or not there was a charge for the service. The second round of activities tested the new definition and the feasibility of collecting information on each type of arrangement separately. The more specific questions prompted respondent recall and cued respondents as to the types of arrangement in which the study was interested. Although this involved asking more questions, the cognitive burden on the respondents was reduced because they did not have to keep multiple criteria in mind while answering.

The cognitive laboratory research also tested whether terms that were used in the initial questionnaire, such as *preschool, nursery school, prekindergarten,* and *day care center,* might hold different meanings for respondents. The findings indicated that parents did indeed have different definitions, particularly for preschool. In the original version of the questionnaire, some respondents gave information about their child's day care center when asked about day care, and then gave the same information again when asked about preschool. The subsequent version of the questionnaire did not use the term *preschool.* Instead, respondents were asked about day care centers, including whether the program had an educational component, and then about nursery school, prekindergarten, or Head Start programs grouped together. When asked about the latter, they were instructed to answer only for programs for which they had not already provided information in order to reduce the incidence of double counting.

The questionnaire also asked parents to specify the type of nonparental care their child had received each year between birth and age 5. Participants had little difficulty accurately counting the number of care arrangements in which their child was currently participating. They were also able to recall past arrangements for their child; however, they found it difficult to specify the arrangements on a year-by-year basis, particularly if they had had several arrangements over the years. Participants in the cognitive laboratory research explored ways to make recall over that period of time easier. They discussed whether it was easier to think in terms of the ages of their children, months, seasons, or school years and summers. However, it appeared from the discussions that parents of the older children in the survey would not be able to report the number of arrangements accurately, even with suggestions that might cue them. Consequently, the revised questionnaire contained only one question asking parents of primary school children whether the child had received nonparental care, either home based or center based, from birth to age 5.

Focus group participants were also asked to comment on the sensitivity of the items and their willingness to answer questions about their children's care arrangements and family activities. They indicated a willingness to answer questions on these topics; however, it was apparent that parents were inclined to answer some questions in a manner that would put their parenting in a favorable light, particularly questions about activities with their children. Parents want to be thought of as competent and caring, and they admitted in their discussions that they might have a tendency to exaggerate time spent with a

child and the types of activities in which they engaged by estimating on the high side. For example, although the question referred to the past week, some parents said that they would probably respond about a "typical" week, if the past week had not included many activities. This finding emphasized the need to both word and order questions carefully to minimize overreporting.

Testing the NHES:93 School Readiness and School Safety and Discipline Questionnaires

Cognitive laboratory research also played a significant part in testing questionnaires for the School Readiness and School Safety and Discipline components of the NHES:93. For the School Readiness component, nine individual interviews and three focus groups containing between six and nine participants each, were conducted. Approximately one-third of the interviews used the think-aloud procedure, one-third used concurrent probes, and one-third used retrospective probes. Separate focus groups were held with parents of children not yet in kindergarten, parents of children in kindergarten, and parents of children in primary grades. For the School Safety and Discipline component, 11 interviews, 5 with parents and 6 with students, were completed, and 4 focus groups, 2 with parents and 2 with students, were conducted. Parent and student focus groups were structured by grade of child, either 6th through 8th grade, or 9th through 12th grade. Written consent for each student's participation was obtained in advance from his or her parent. Parent participants and student participants also signed consent forms before the discussion began. All participants were paid an honorarium.

Participants were recruited through flyers posted in businesses, such as grocery stores and office buildings, and in apartment and housing complexes with ethnically diverse residents located in the Rockville, Maryland, area and through the personal networks of Westat employees in Frederick and Gaithersburg, Maryland. Recruitment criteria included diversity on racial/ethnic, gender, and socioeconomic status as measured by highest occupation in the family. An additional criterion for the School Readiness research was having representation of a range of participation in types of nonparental care, as well as in parental care. For the School Safety and Discipline component, limits were placed on the number of students or parents of students attending private schools who could take part in the research, and parents who had ever worked for a school system or held office in a parent-teacher association were excluded, as were students or parents of students attending alternative schools because of behavior problems.

The results of the cognitive laboratory research conducted with youth participants to test the School Safety and Discipline questionnaire illustrate further the utility of including these methods in the design of a survey. Particular care was taken with the wording of the items for this survey component because both parents and students in grades 6 through 12 would be answering many of the same questions. Questions were crafted to appropriately cue each population and to be easily comprehensible to youth as young as 11 years old. Nevertheless, the cognitive laboratory research revealed some lack of clarity. For example, the test questionnaire contained questions about knowledge of and victimization by bullying. Youth appeared to have no difficulty understanding this question and responded in the interviews with correct definitions of bullying. However, a more extended discussion that took place in the focus group of younger students revealed that they had a correct, but narrow, perception. They did not think a person was being bullied unless he or she was under immediate physical threat. They failed to count cases of extortion of lunch money, for example, in which the intimidation was pervasive but subtle. As a result of this finding, the final version of the questionnaire included a definition of bullying to cue the respondents to the broader meaning of the term.

Cognitive laboratory research also provided reassurance that some terms, thought to be too sophisticated perhaps, were likely to be readily understood by respondents. For example, youth were

asked if they would think that any fight that took place between some white students and some black students was racially motivated. The participants in this research indicated they understood the term "racially motivated" as it was intended. The students asserted that they would know the cause of fights at their schools, and only incidents caused by specific animosity between racial groups, not just any incident that involved both blacks and whites, would be labeled racially motivated.

The individual interviews were particularly valuable in assessing respondent comprehension and guiding revision of the School Safety and Discipline instrument. Youth had difficulty with the think-aloud procedure but were able to recall their thought processes in response to both concurrent and retrospective probes. Often, inconsistencies in their responses revealed a lack of comprehension, and the ability to explore meanings at length with one participant at a time was constructive. In some cases, comments made only a single time in the research had an impact on the redesign of the questionnaire, and several items were reworded to improve respondent comprehension. For example, because one youth interpreted *get the following things on school property* (referring to tobacco, alcohol, and other drugs) as carrying them onto the school grounds rather than obtaining them on school property, the wording was changed to *get the following things at school or on the school grounds*. Not only were respondents' specific confusions and suggestions about improving clarity helpful, but also the research yielded subtle intimations about adolescent, and particularly preadolescent, cognitive abilities that inspired changes in item wording. For example, because a youth thought *under the influence* of alcohol meant *under the age* to drink legally, separate words, not just whole phrases were examined for potential confusion for respondents. Because of the findings from the interviews, for example, the survey asked about students who were *drunk or showed the effects of alcohol* at school.

Findings from both the individual interviews and the focus groups revealed that the youth had difficulty with questions that required them to think about their school experiences in the abstract. For example, they had difficulty evaluating whether the school was preparing them well for further study or for a future job, or whether most of the students at the school were well behaved. On the other hand, they had little difficulty with questions that asked about personal experiences, such as whether they enjoy school or if they are challenged by their classes. This preference for the personal was reflected in the divergent meanings assigned to the term *classmate*. Some thought about the class leaders and some about the troublemakers, while others thought of their own friends. However, when asked about *your friends at school*, the youth participants described a clearer frame of reference. They reported that they knew exactly about whom they were thinking. This finding led to rewording questions, wherever appropriate, to personalize the reference for the respondent. For instance, instead of asking about pressure from other students at school to use tobacco, alcohol, or other drugs, the question asks if the youth's friends at school think it is all right to smoke cigarettes, etc. And rather than asking how easy or difficult it would be for students to obtain those substances at the school, the question was worded to ask how easy or hard it would be for the youth respondent to obtain the substances if he or she wanted to. As a result of the cognitive laboratory research, the data obtained from youth are likely to be much more accurate.

Evaluating Respondent Comprehension During Data Collection Through Taped Interviews

An additional data quality activity that has been conducted in the NHES is recording and analyzing a small number of interviews taped during data collection. This activity provides another check on questionnaire wording in terms of respondent comprehension and the ability of respondents to provide accurate responses. The research was

conducted during the NHES:91 and the NHES:93. Different analysis techniques were used for each survey. For the NHES:91, content analysis of the transcripts of the taped interviews was conducted. For the NHES:93, a different methodology based on coding interviewer-respondent interaction on an item-by-item basis was used.

Content Analysis of Taped Interviews

During data collection for the NHES:91, a small number of extended interviews were recorded and subjected to a systematic content analysis, although not coded item by item. The analysis of the taped interviews took a linguistic and holistic approach to the interview process. The cumulative effects of the telephone interview process, and of the wording of and responses to early interview items on respondents' comprehension of later terms were considered. The analysis was conducted by staff who were not involved in the design of the survey instruments and who had not participated in the earlier cognitive laboratory research. The purpose of the research was to assess respondent comprehension during actual telephone interviewing.

Taping was done during the last 2 weeks of data collection, and only cases that had never been coded a refusal (i.e., to the Screener or to another extended interview in the household) were eligible. Respondents were asked for permission to record their interview after they had completed the screening questions, but before the extended interview began. If any reluctance on the part of the respondent was detected, the interview was not taped. Thus, participation was voluntary, and this should be noted when interpreting results. Twenty-one interviews (11 for the Early Childhood Education component and 10 for the Adult Education component) were taped and analyzed. Two additional interviews were taped but not analyzed because the extended interview was not completed.

Examples from the taped Adult Education interviews demonstrate the contribution of this research to improving data quality in future surveys. In the Adult Education survey, the respondents were read a definition of adult education activities. Some of the taped interviews revealed that respondents recalled participation in adult education activities late in the interview, including participation in activities that should have been included in earlier responses. Respondents seemed to hold clear definitions of what constituted adult education, but those definitions were personal and varied widely. (Had cognitive laboratory research been conducted on the Adult Education component during the design of the NHES:91, this might have been learned earlier.) This finding indicated that cognitive research during the design of future questionnaires should explore ways of cuing respondents more accurately to the definition used in the survey, as well as exploring the feasibility of cueing them earlier in the interview.

The issue of sidetracking, in which respondents are still considering a previous question or their response to a previous question when the next question is asked, also emerged from analysis of the taped interviews as an important data quality issue. For instance, respondents were read a list of types of educational activities that included full-time, degree-seeking education, part-time, degree-seeking activities, and all other types of educational activities. These types were intended to cue them to their possible participation but were not intended to be mutually exclusive or exhaustive. In some of the interviews, respondents were still pondering one type of activity as the interviewer read another, resulting in an increased potential for inaccurate responses. This suggested that future design activities should test shorter and more distinct cues for the different types of activities. Also, interviewer training should emphasize allowing respondents ample time to absorb the meaning of an item.

Interviewer-respondent interaction during the interview was also considered. The Adult Education respondents were asked questions about full-time, degree-seeking education, part-time, degree-seeking activities, and all other types of educational activities. They were asked about the number of activities, names of courses, and names of providers. It was often necessary for interviewers to clarify for respondents whether some activities constituted a separate course or activity. For example, one respondent was confused about whether private instruction taken to help pass a college course was part of the course or should be counted as a separate activity. The need for interviewer clarification pointed to items that could be improved for future administrations. Issues such as providing more versus providing fewer cues and the placement of cues in the interview would be appropriate to consider in cognitive laboratory activities for future surveys.

Similarly, the interview required the repetition of a series of questions about each course (for up to four courses) taken during the past 12 months. In some interviews it was quite clear that all courses were taken for the same reason, and a few of the interviewers mentioned that reason first so the respondent did not have to hear the same lengthy list repeated again and again. The subsequent administration of this component in the NHES:95 included methods to reduce the repetition in the survey.

Interviewer–Respondent Behavior Coding

The analysis strategy used for the NHES:91 taped interviews led to valuable insights that influenced the design of subsequent surveys. However, building on recent research on coding respondent and interviewer behavior (Oksenberg, Cannell, and Kalton 1991), project staff employed another way of coding taped interview data for the NHES:93. A structured coding scheme was developed for each item in the survey that would point to areas of the School Readiness and School Safety and Discipline questionnaires in which deviations from the question wording occurred or for which interviewer clarification was required. This method provided a quantifiable indication of how well the questionnaires allowed the interviewers to follow prescribed procedures and evoked from the respondents an answer that could be coded using the established response categories. However, like the content analysis conducted in 1991, it did not provide reasons for deviations from the questionnaire structure.

Seventy interviews, 25 School Readiness interviews, 25 School Safety and Discipline parent interviews, and 20 School Safety and Discipline youth interviews, were taped during data collection and analyzed by two specially trained coders. Interviewer behavior was rated according to the following five codes: interviewer read the question exactly as worded, interviewer read the question with only a minor wording change, interviewer read the question with a major wording change, interviewer clarified the question for the respondent, or interviewer displayed some affect. Respondent behavior was coded using six categories: respondent gave a "correct" response (i.e, one that fit a precoded response alternative), respondent interrupted the interviewer before the question was completed, respondent clarified the question, respondent qualified the answer with respect to accuracy, respondent did not provide an adequate answer, or respondent expressed sensitivity to the question. (See Appendix C for an example of a coding form). Fourteen interviews were coded by both of the two coders. The greatest discrepancy was between "exact wording" and "minor wording change." For example, one coder coded pausing as a minor wording change, and the other did not. When the "exact wording" and "minor wording change" categories were collapsed, overall inter-rater reliability was high, ranging from 78 percent to 84 percent over the three types of interviews.

The analysis produced the number of times and the percentage that each code was used for each of the three interview questionnaires. It also permitted evaluation of each question according to the codes assigned across all of the interviews of that type. This allowed identification of specific questions that had been subject to major wording changes by the interviewer, or that had caused the respondent to ask for clarification or to produce a response that was not initially codable.

Valuable information was obtained from this analysis. For example, the introductions at the beginning of sections of the questionnaires, intended to cue respondents to a change in topic, were coded as having the most minor wording changes. This may be due to interviewers who are responding to the conversational demands of the interview process by trying to place the new topic in the context of what has gone before. The analysis also highlighted the difficulty that respondents have with series of questions that have a Likert response scale, such as *strongly agree, agree, disagree, and strongly disagree*. The information gleaned from the analysis of taped interviews will be useful in the design of new NHES surveys, both in a general sense, and when the specific topics are included in a future data collection.

Summary

The National Household Education Survey has incorporated cognitive laboratory research and analysis of taped interviews as integral parts of its design process. Individual interviews, using concurrent and delayed cognitive laboratory methods, and focus groups guided by lengthy protocols contributed to the assessment of the feasibility of topical components of the survey and to testing the questionnaires to reduce measurement error. Taping and analysis of live interviews measured interviewer and respondent behavior during data collection and contributed to the understanding of words and items that may cause difficulty. The findings will guide cognitive laboratory research for future survey administrations. The NHES will continue to explore new ways to utilize cognitive laboratory research and other data quality activities and to adapt the work of other researchers to enhance coding schemes used in the analysis of the NHES data quality.

References

Bates, N., and DeMaio, T.J. (1990). *Report on Cognitive Research on the Public and Private School Questionnaire for the Schools and Staffing Survey (SASS-3A and SASS-3B).* Internal Census Bureau Memorandum. July 11, 1990.

Brick, J.M., and West, J. (1992). Reinterview Program for the 1991 National Household Education Survey. *Proceedings of the Section on Survey Research Methodology*, 387-392. Alexandria, VA: American Statistical Association.

Brick, J.M., Collins, M., Nolin, M.J., and Davies, E. (Forthcoming). *Selected Data Quality Activities in the NHES:93.* Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Brick, J. M., Rizzo, L., and Wernimont, J. (Forthcoming). Reinterview Results for the School Readiness and School Safety and Discipline Components of the 1993 National Household Education Survey (NCES 96-339). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Campanelli, P., Rothgeb, J., Esposito, J., and Polivka, A. (1991). Methodologies for Evaluating Survey Questions: An Illustration from a CPS CATI/RDD Test. Paper presented at the 1991 Annual Meeting of the American Association for Public Opinion Research, Phoenix.

Cantor, D., and Edwards, C. (1992). *Testing an Alternative Household Rostering Procedure for the Survey of Income and Program Participation* (SIPP Working Paper 92-03). Washington, DC: U.S. Bureau of Census.

Cantor, D., Kerwin, J., Sheridan, S., Powell, T. and Banthen, J. (1995). Validating Information with Cognitive Interviews to Measure Respondent Knowledge: Developing Questions to Report Health Care Plans. Paper presented at the International Conference on Survey Measurement and Process Quality, April 1995, Bristol, England.

Dippo, C.S., and Norwood, J.L. (1992). A Review of Research at the Bureau of Labor Statistics. In J. Tanur (ed.), *Questions About Questions: Inquiries into the Cognitive Bases of Surveys*, 271-290. New York: Russell Sage Foundation.

Ericsson, K.A. and Simon, H.A. (1980). Verbal Reports as Data. *Psychological Review, 87*: 215-51.

Ericsson, K.A., and Irwin, H.A. (1984). *Protocol Analysis: Verbal Reports As Data.* Cambridge, MA: MIT Press.

Forsythe, B.H., and Lessler, J.T. (1991). Cognitive Laboratory Methods: A Taxonomy. In P.P. Biemer, R.M. Groves, L.E. Lyberg, N.A. Mathiowitz, and S. Sudman (eds.), *Measurement Errors in Surveys*, 395-418. New York: John Wiley and Sons.

Groves, R.M. (1989). *Survey Errors and Survey Costs.* New York: John Wiley and Sons.

Jenkins, C. (1992). Questionnaire Research in the Schools and Staffing Survey: A Cognitive Approach. *Proceedings of the Section on Survey Methods Research*, 434-439. Alexandria, VA: American Statistical Association.

Jenkins, C., Ciochetto, S., and Davis W. (1992). *Results of Cognitive Research on the Public School Questionnaire for the Schools and Staffing Survey (SASS-3A).* Internal Census Bureau Memorandum.

Jobe, J.B., and Mingay, D.J. (1991). Cognition and Survey Measurement: History and Overview. *Applied Cognitive Psychology*, 5: 175-92.

Krueger, R.A. (1988). *Focus Groups: A Practical Guide for Applied Research.* Newbury Park, CA: Sage.

Lessler, J., Bercini, D., Tourangeau, R., and Salter, W. (1986). Cognitive Laboratory Studies of the 1986 Supplement to the National Health Interview Survey Final Results. *Proceedings of the Section on Survey Methods Research*, 478-80. Alexandria, VA: American Statistical Association.

Lessler, J., Tourangeau, R., and Salter, W. (1989). Questionnaire Design in the Cognitive Laboratory Research. *Vital and Health Statistics: Series 6, Cognition and Survey Measurement, No. 1.* Washington, DC: U.S. Department of Health and Human Services (DHHS Publication No. (PHS) 89-1076).

Merton, R.A., Fiske, M., and Kendall, P. (1956). *The Focused Interview: A Manual of Problems and Procedures.* Glencoe, IL: Free Press.

National Education Goals Panel (1991, 1992). *The National Education Goals Report: Building a Nation of Learners.* Washington, DC: U.S. Government Printing Office.

Oksenberg, L., Cannell, C., and Kalton, G. (1991). New Strategies for Pretesting Survey Questions. *Journal of Official Statistics, 7, 3*: 349-65.

Presser, S., and Blair, J. (1994). Survey Pretesting: Do Different Methods Produce Different Results? In P.V. Marsden (ed.), *Sociological Methodology*, 73-104. Washington, DC: The American Sociological Association.

Schwartz, N. (1995). What Respondents Learn from Questionnaires: The Survey Interview and the Logic of Conversation. *International Statistical Review, 63*: 153-177.

Appendix A:

Moderator's Topic Guide for Parent Groups

Written consent was obtained from each participant.

NHES: 93 SCHOOL SAFETY AND DISCIPLINE

MODERATOR'S TOPIC GUIDE FOR PARENT GROUPS

I. Warm-up and Explanation (10 minutes)*

A. Introduction

1. Thanks for agreeing to come.

2. Your participation is very important.

3. A focus group is like an opinion survey, only with very broad, general questions.

B. Purpose of Focus Group

1. This evening we will be talking about safety and discipline in the junior high (high school). Information from this group and other groups with parents and students will be used to help develop a questionnaire on this subject for a survey of parents and students across the country.

2. Everyone has different experiences; all of your ideas, comments and suggestions will be helpful.

3. There are no right or wrong answers. It is all right to disagree with other comments. We hope to get many points of view.

4. All comments - both positive and negative - are welcome.

C. How the Group Works

1. The session is being tape recorded, and observers are present behind the one-way mirror. However, all comments are confidential - used for research purposes only.

2. This is a group discussion, so you need not wait for me to call on you. Please speak one at a time so the tape recorder can pick up everything.

3. We have a lot of ground to cover, so I may change the subject to move ahead. Please stop me if you want to add something.

D. Introduction of Participants

1. Let's take a moment to go around the table and introduce ourselves. Tell us your first name and what you like to do in your spare time. Also tell us how many children you have and the age and grade of your child in junior high (high school).

*Participants were asked to sign a consent form in the waiting room.

Written consent was obtained from each participant.

II. School Safety (30 minutes)

* A. I'd like to start out talking with you about occurrences that may make your child feel afraid or unsafe at school, OR may cause you to worry about him or her. These occurrences may take place either during the school day or while your child is going to or from school (I'm NOT talking about environmental hazards such as asbestos, dangerous playground equipment, etc.) . What actions, behaviors, events come to mind? (LIST ON EASEL) (Probe: physical/verbal abuse, theft, vandalism, substance use, locker crime)

* B. How many of you feel these kinds of occurrences at school have been a personal issue for your child at any time in junior high (high school) (TAKE COUNT)? In general, what aspects of school safety concern or worry you the most?

* C. Let's consider something else (something you touched on earlier) -- the issue of disruptive behavior, whether in the classroom, hallway, playground, school bus, etc. What kind of disturbances or infractions contribute to the atmosphere of a school being unsafe or not conducive to learning? (ADD ITEMS TO LIST ON EASEL)

D. Tell me how important you consider these major to minor disturbances that we've mentioned to be? Why do you say that?

* 1. What impact does it (can it) have on a child's behavior, sociability, learning, feelings toward school, attendance, emotional state (e.g., fear)?
(Probe: Does it interfere with learning? What percentage of class time do you feel teachers spend dealing with disruptive behavior?)

2. (Opt.) Is there another issue you would compare it to, or put it on the same par with? How do you see it in relation to other issues parents of junior high/high school students have to deal with?

E. How would you rate your child's school in terms of it being a safe, pleasant and a conducive place to learn? Where would you put it on a scale of 1 - 5 where 1 is "not at all safe/pleasant/conducive to learning" and 5 is "very safe/pleasant/conducive to learning." (GO AROUND TABLE TO GET RATINGS)

1. Those of you who gave higher ratings (say, 4 - 5), how do you know that your child's school is safe and provides a proper atmosphere for learning?

2. (Opt.) Probe: Where/how do you get your information -- e.g., Have there been meetings with parents to explain school security and safety? Has the PTA looked into the situation, made recommendations and did the administration listen/act? Have the local police been visible at the school -- talking at assemblies, etc?)

F. (Opt.) What do you actually look for to determine if a school is safe? In other words, how do you evaluate a school -- what criteria do you use? (Probe: Is it realistic to expect a school to be 100 percent safe?)

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*High priority question.

Written consent was obtained from each participant.

* G. What would you do (or have you done) if you thought your child's school was unsafe? (Probe: switch to another school -- public or private; restrict your child's behavior; band together with other parents; speak to school officials)

H. How do you know when a school is unsafe? (Why did some of you assign ratings of 1 - 2 to your child's school?) Can you give me some examples of what makes a school unsafe?

1. What role does rumor play? How would you react if you heard that someone at your child's school had been attacked? (Probe: Does that make the school unsafe?)

2. (Opt.) Some people are afraid that safety in the schools may be getting worse. What does "getting worse" mean to you?

III. Alcohol and Drug Use (25 minutes)

* A. Teenage alcohol and drug use has already come up in our discussion. At this point, I'd like to talk more about these issues. Before we do, however, I want to pass out a piece of paper with some statements on it, and I'd like you to indicate on a scale of 1 - 5 how much you agree (or disagree) with each one. Please be as honest as you can; do not put your names on these sheets.
(DISTRIBUTE HANDOUT CONTAINING THE FOLLOWING STATEMENTS AND A 5-POINT AGREE/DISAGREE SCALE)

1. Young people should not be allowed to drink alcohol until they reach the age of 18.

2. Drinking is taboo by anyone in my (our) household.

3. I think some parents get overly upset by their child using marijuana (grass) on an occasional basis.

4. I do not allow my child to attend parties or other social events unless I check to be sure an adult chaperon will be present.

5. I do not allow my child to have parties at my house with alcohol (including beer, wine, wine coolers).

6. Experimenting with alcohol or marijuana is just a part of growing up today.

7. Smoking is a relatively harmless form of teenage rebellion.

8. If my child had to experiment with something, I would rather it were alcohol than marijuana.

9. I feel I am less tolerant of teenage drinking than other parents of teenagers I know.

10. I could understand if my child tried cocaine or heroin only once.

(HAVE PARTICIPANTS PASS PAPERS FORWARD)

* B. How common do you think it is for junior high (high school) students to attend functions outside of school where alcohol is available? How about marijuana? Hard drugs (cocaine, heroin)? Amphetamines?

* C. Let me get your reaction to something else. A parent in one of my groups said recently that he and his wife occasionally offer their teenagers a drink so that having a drink will not be a big deal to them -- in other words, it won't be an allurement or "forbidden fruit." How do you feel about this?

* D. Some statistics have shown that the majority of teenagers try alcohol in high school. At what age would you not be alarmed if you heard your son or daughter were at a party and had a few beers or wine coolers? Conversely, at what age (or under what conditions) would you be alarmed to hear this?

* E. Do you think you would actually know if your child were using cigarettes, alcohol, marijuana, or other drugs? How would you know? (Probe: Have you ever talked with your child about his/her use of cigarettes, alcohol, or drugs, or do you just know?)

* F. Do you have any rules in your household about drinking? (What are they?) How about marijuana use? Other drugs? Smoking? Are there any consequences or punishments for using these things? (What are they?)

IV. Discipline Policy (Rules and Regulations) (35 minutes)

A. Now I'd like to change the subject somewhat and talk to you about discipline policy. Before asking you some general questions; however, I'd be interested in hearing what would happen at your child's school if the following situations arose...

1. A student at your child's school was caught drinking alcohol during the school day? (Probe: Would this be a fair action if your child had just a few sips of beer that another student had brought to a school football game?)

2. One student physically attacked another student? (Probe: Would this be a fair action if your child had gone through several weeks of verbal bullying and either your son got into a fistfight, or your daughter slapped the person bullying her?)

3. (Opt.) A student shouted obscenities at a teacher who was reprimanding him/her? (Probe: Would this be a fair action if your child muttered the same obscenities while walking away after a reprimand?)

B. Do you feel that discipline (or the lack thereof) is a problem in the junior high (high) schools? When I use the term "school discipline," I'm talking about disruptive behavior in the classroom as well as some of the other items we discussed earlier. (We're not

talking about discipline for dress code infractions or tardiness to school.) Why do you say that?

C. What do you think school officials should be doing to ensure safe and well-disciplined schools?

1. Should suspensions and expulsions be used as forms of punishment?

2. The mayor of Washington has suggested introducing corporal punishment back into the schools -- what do you think of that?

3. How do you feel about random locker searches, metal detectors, drug-sniffing dogs, random urine testing, hall patrols?

* D. Do you know whether or not your child's school has a discipline policy?

1. Do you know if it is written down? What form does it take (e.g., handbook)?

2. Have you ever seen/read it? Do you have a copy?

3. How was it developed? Who put it together? (Probe: Was there any input from parents? Students?)

4. What does it cover (e.g., disruptive behavior, substance use)?

E. How do you feel about the discipline policy at your child's school? Is there anything you particularly like about it? Particularly dislike about it?

1. Do you consider it too strict? Too lenient? In what way(s)? How do you judge this (i.e., what standard are you using)?

2. Do you feel that the school acts (i.e., sets policy) only after an incident occurs or is it more proactive in nature, setting policy in advance of something happening?

F. Having a policy is one thing; how it functions can be something else. What do you think about how the discipline policy at your child's school actually works?

1. Are regulations consistently and fairly applied? What standard are you using to evaluate this?

2. Are there separate rules (or are the rules interpreted differently) for first-time offenders versus repeat offenders?

3. Is the punishment the same for possessing drugs, using drugs, and distributing drugs (i.e., encouraging others to use)? How do you feel about this?

4. Do you know if there is a way for the discipline policy at the school to get changed or amended? (Probe: Can you think of any circumstances that might cause you or other parents to appeal for a change in how the policy is applied?)

Written consent was obtained from each participant.

* G. We've talked so far about safety and discipline at the junior high (high school) level. I'd like you to think back for a minute to the time when your child was in elementary/grade school. Would you say that safety and discipline were of greater concern, lesser concern, or of the same concern to you then as they are now? (TAKE COUNT)

1. What safety and discipline concerns did you have for your child in elementary/grade school? (What things made your child feel unsafe or afraid, or caused you to worry?)

2. At what age/grade level did you become concerned about the possibility of disruptive behavior and/or substance use in the school and its possible impact on your child?

V. Alcohol Drug Education in the School (20 minutes)

A. In the time remaining, I'd like to get back to the subject of alcohol and drugs and talk with you about alcohol and drug education in the junior high (high school). Is it important for you to have alcohol/drug education as part of the school curriculum?

1. (Opt.) Probe: What aspects of your child's education do you consider to be more important? Less important? On a par with alcohol/drug education?

* B. Does your child's school currently have an alcohol/drug education program? (TAKE COUNT)

1. What do you know about it?

2. Are drug and alcohol education handled together (as part of same course) or separately?

3. Do you know what overall message your child is getting? (Probe: Is it a "no use" message or a "responsible use" message?) Does this agree or conflict with your own attitude toward education on this subject?

C. How do you feel about the adequacy of the alcohol/drug education your child is given in school? How are you making this judgment?

D. (Opt.) Are there any drug education programs for parents at your child's school (e.g., to help them form their own peer or support group)?

VI. Wrap-up

A. We've come to the end of the session. Is there anything you'd like to add on any of our topics tonight?

B. Thank you for coming. Your opinions have been very valuable to us. Please see receptionist on your way out.

Appendix B:

Moderator's Topic Guide for Adolescent Groups

Advance written consent was obtained from each student's parent.
Written consent was also obtained from each student.

NHES: 93 SCHOOL SAFETY AND DISCIPLINE

MODERATOR'S TOPIC GUIDE FOR ADOLESCENT GROUPS

I. Warm-up and Explanation (15 minutes)

A. Introduction

1. Thanks for agreeing to come.

2. Your participation is very important.

3. A focus group is like an opinion survey, only it's done in a group.

B. Purpose of Focus Group

1. This afternoon we will be talking about safety and discipline in the junior high (high school). Information from this group and other groups with students like yourselves will be used to help develop a questionnaire on this subject for a survey of parents and students across the country.

2. Everyone has different experiences; all of your ideas, comments, and suggestions will be helpful.

3. There are no right or wrong answers. It is all right to disagree with other comments. We hope to get many points of view.

4. All comments - both positive and negative - are welcome.

5. I would like to hear from everybody.

C. How the Group Works

1. The session is being tape recorded and observers are sitting behind the one-way mirror. However, all comments are confidential - used for research purposes only.

2. This is a group discussion. You need not wait for me to call on you, but please speak one at a time so the tape will be clear. Also, be sure to give others in the room a chance to speak.

3. We have a lot of things to talk about, so I may change the subject in order to move ahead.

Advance written consent was obtained from each student's parent.
Written consent was also obtained from each student.

4. Before we start, I have consent forms for you to sign. I'll read it out loud and then you can sign it and pass it to me. [NOTE: Prior written consent was obtained from each student's parent.]

D. Introduction of Participants

1. I'd like to take a few minutes for us to get to know each other. Instead of having you introduce yourselves (the way it's usually done), I'm going to ask you to introduce the person sitting next to you. Take a couple of minutes right now to talk to the person on your right. Find out his/her first name, age, grade in school, name of school attending, number of brothers and sisters and what hobbies or after-school activities the person is into (i.e., what he/she likes to do in his/her spare time.) (LIST ABOVE ITEMS ON EASEL FOR REFERENCE)

II. School Safety (30 minutes)

* A. I'd like to start out talking about things that make you (or your friends) feel afraid or unsafe at school. These are things that may take place either while you are in school or while you are going to or from school. What comes to mind first? What different things can you think of? (LIST ON EASEL) (Probe: physical/verbal abuse, theft, vandalism, substance use, locker crime)

* B. Which things on this list concern you and your friends the most? Write the word "Most" on your pad and next to it the item on the easel that concerns or worries you most at your school. Which one worries you the next most after that? Write "Next Most" on the next line and then the item from your experience that fits best.

* C. (IF NOT ALREADY MENTIONED) Let me bring up something else here -- disruptive behavior. Does this go on at your school? What do you think of when I say "disruptive behavior?" (What kinds of disruptive behaviors make the atmosphere at school seem unsafe or make it difficult for students to learn?) (ADD TO LIST)

1. Do you think teachers spend too much or too little time dealing with disruptive behavior?

* D. Are these various things we've put up on the easel important to you? Why do you say that?

1. Do you think things are different in a safe school than in an unsafe school? (Probe: How easy or hard is it to learn in a school that doesn't have a safe atmosphere?)

*High priority question.

2. How else are students affected (e.g., in terms of behavior, sociability, feelings toward school, attendance, fear)?

E. (Opt.) How do you know if a school is safe (any school, not necessarily your school)? Write down three things that would tell you a school is safe.

* F. Think of someone you know who goes to an unsafe school and write down three things that would tell you a school is unsafe.

1. How would you feel if you heard a rumor that someone had been attacked at school? (Probe: Does that make you think the school is unsafe?)

* G. How safe do you think your school is? Where would you put your school on a scale of 1 - 5 where 1 is "very unsafe/a difficult atmosphere to learn in" and 5 is "very safe/an easy atmosphere to learn in?" (HAVE SCALE ON EASEL) Write down the number on the scale that tells how safe you think your school is.

1. Can you give me an example of something that happened at your school that made it seem unsafe; either something that happened to you, or to one of your friends. How did this make you feel?

2. How do you know or find out about other students who are victims of crimes?

* H. What do students do if they think their school is unsafe? Do they change their behavior or habits in any way to protect themselves (e.g., avoid certain corridors or bathrooms at school)?

III. Alcohol and Drug Use (20 minutes)

A. Use of alcohol and drugs has come up a number of times in our discussion. I'd like to talk with you more about this subject, but before we get into that, I want to pass out a piece of paper with some statements on it, and I'd like you to indicate on a scale of 1 - 5 how much you agree (or disagree) with each one. Please be as honest as you can; there is no need to put your names on these sheets.
(DISTRIBUTE HANDOUT CONTAINING THE FOLLOWING STATEMENTS AND A 5-POINT AGREE/DISAGREE SCALE. BE SURE EVERYONE UNDERSTANDS SCALE). Alcohol means beer, wine, wine coolers and hard liquor.

1. Young people should not be allowed to drink alcohol until they reach the age of 18.

2. Drinking by teens is not allowed in my house.

3. I think some parents get overly upset by their child using marijuana (grass) on an occasional basis.

Advance written consent was obtained from each student's parent.
Written consent was also obtained from each student.

4. I cannot go to parties or other social events unless my parents know an adult chaperon will be there.

5. I cannot have parties at my house with any alcohol.

6. Trying alcohol or marijuana is just a part of growing up today.

7. Smoking cigarettes is a pretty harmless way for teenagers to show their independence.

8. Lots of teenagers try drugs like coke, heroin, or amphetamines once or twice.

9. It is easy for kids I know at my school to obtain alcohol.

10. It is easy for kids I know at my school to obtain marijuana.

11. It is easy for kids I know at my school to obtain other drugs such as coke, heroin or amphetamines.

(HAVE PARTICIPANTS PASS PAPERS FORWARD)

* B. Do you remember what grade you were in when your classmates were first thinking about smoking cigarettes? How about drinking alcohol? Using marijuana? Other drugs?

C. Do you think your parents would know if you were using cigarettes, alcohol, marijuana, other drugs? How would they know?

D. Are there any rules in your household about drinking? (What are they?) How about cigarettes? Marijuana? Other drugs (coke, heroin, amphetamines)? Are there any consequences or punishments for using these things? (What are they?)

1. Have your parents ever talked to you about using cigarettes, alcohol, marijuana, other drugs? How do you feel about their views on these subjects?

2. At what age do you think it is all right to have alcohol at a party? (At what age, or under what conditions, do you think this would be wrong?)

IV. Discipline Policy (Rules and Regulations) (40 minutes)

A. Now I'd like to change the subject somewhat and talk to you about discipline policy at school. What does the word "discipline policy" mean to you? What else do you call it? (AFTER PARTICIPANTS GIVE THEIR INTERPRETATION) In this part of the discussion, when I use the term "discipline policy," I will be referring to the rules and regulations at school that cover disruptive behavior in class as well as some of the other behaviors we listed on the easel. (We're not talking about discipline for violating the dress code or coming to school late.)

Advance written consent was obtained from each student's parent.
Written consent was also obtained from each student.

B. Before I ask you some general questions on school discipline, I'd be curious to know what would happen at your school if the following situations came up...

1. A student was caught drinking alcohol during the school day? (Probe: Would this be a fair action if your best friend had just a few sips of beer that another student had brought to a school football game?)

2. One student physically attacked another student? (Probe: Would this be a fair action if, for example, someone at school was spreading false rumors about you and these rumors were hurting your relationships with your friends, so during a confrontation with the person, you hit him/her?

3. (Opt.) A student shouted a couple of four-letter words at a teacher who was chewing him/her out? (Probe: Would this be a fair action if you said the same words while walking away from a teacher after he/she had yelled at you mostly because he/she was being unfair or was in a bad mood, not because you had done something really wrong?

C. What do you think the school administration should be doing about safety and discipline in the junior high (high school)?

1. Do you think that suspensions and expulsions should be used to discipline students?

2. Do you know what "corporal punishment" is? You may have heard that the mayor of Washington, DC has suggested that corporal punishment be put back in the schools -- what do you think of that?

3. How do you feel about random locker searches, metal detectors, drug-sniffing dogs, random urine testing, hall patrols?

D. Do you know if your school has a discipline policy -- or a set of rules or regulations about discipline?

1. Is it written down anywhere? Where (e.g., handbook)?

2. Have you ever seen or read it? Do you have a copy?

3. Who put it together? (Probe: Did students have any say in it? How about parents?)

4. What things does it cover (e.g., disruptive behavior, substance use)?

E. How do you feel about the discipline policy at your school? Is there anything you like about it? Dislike about it?

1. Do you consider it too strict? Too lenient? In what way(s)? How do you judge it (i.e., is there a standard of some kind you're using)?

* F. What do you think about how the discipline policy at your school actually works?

1. Are rules and regulations applied fairly to different students? What standard are you using to say this (how do you know)?

2. Are there different rules for kids who do something wrong the first time and kids who have done it several times?

3. Is the punishment the same for using drugs, having drugs in your possession, or for distributing drugs (i.e., encouraging others to use)? How do you feel about that?

4. Does the discipline policy at your school ever get changed? What makes this happen? Do students ever appeal for a change in the policy? (Under what circumstances?)

5. Do you feel that the school makes rules only after an incident occurs, or does it set policy before something happens?

V. Alcohol/Drug Education in the School (15 minutes)

A. In the time we have left, I'd like to get back to the subject of alcohol and drugs, and talk with you a little bit about alcohol and drug education in the junior high (high school). Does your school have an alcohol/drug education program? (TAKE COUNT)

1. Tell me about the program. What is it like? When do you have it?

2. Are there separate units on alcohol and drugs, or are they all together in the same program?

* B. How do you feel about the alcohol/drug education program at your school? Is it good/not good? How do you judge it?

1. Do you remember anything from it?

2. Do you think it has affected you? How about your friends?

3. What overall message are you getting from the program? Would you say it's a "Don't Use [at all]" message or a "Use Responsibly" message?

C. Do you think it's important to have alcohol/drug education as part of the school curriculum? Tell me why you say that.

VI. Wrap-up

A. We've come to the end of the group. (IF TIME) Is there anything you'd like to add on anything we've talked about?

Advance written consent was obtained from each student's parent.
Written consent was also obtained from each student.

B. Thanks for coming. Your thoughts have been very helpful to us. Please see the receptionist on your way out.

Appendix C:

Form for Behavior Coding of Interviewer-Respondent Interactions from Taped Interviews

NHES:93 SCHOOL READINESS INTERVIEW

RESPONDENT ID:_____ **INTERVIEWER INITIALS:** _____

	INTERVIEWER						RESPONDENT						
Question Number	Exact	Minor	Major	Clarify	Affect		Correct	Interrupt	Clarify	Qualify	Not Adequate	Sensitive	Comments
INTRO													
R1													
R2													
R3													
R4													
R5													
R6													
R7													
R8													
RINTRO													
R10													
R11													
R12													
R13													
DPINTRO													
R14													
R15													
R16													
R17													
R18													
R19													
R20													
R21													
R22													

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