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I. Introduction

President Clinton signed The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, more commonly known as the Welfare Reform Act, on August 22, 1996. One section of the Act charged the U.S. Bureau of the Census:

- To continue to collect data on the 1992 and 1993
 panels of the Survey of Income and Program
 Participation (SIPP) to evaluate the impact of the law
 on a random national sample of recipients of
 assistance;
- To pay particular attention to the issues of out-ofwedlock birth, welfare dependency, the beginning and end of welfare spells, and the causes of repeat welfare spells; and,
- To obtain information about the status of children participating in such panels.

Toward this end, the Census Bureau developed the Survey of Program Dynamics (SPD). With current funding, the SPD will extend the 1992/93 SIPP panels through 2002 resulting in 10 years of longitudinal data.

The SPD is comprised of two parts. The first part is called the "core" instrument and includes questions about adults and children. The adult questions, with a few minor exceptions, are asked of all household members ages 15 and over. The core questionnaire was designed for computer-assisted personal interviewing (CAPI). The second part is a separate self-administered questionnaire (SAQ) for adolescents 12-17 years of age. In this paper, we will discuss results from two pretests we conducted on the adolescent SAQ: one, a series of "think aloud" cognitive interviews, and two, a small field pretest.

II. Background

The Census Bureau, Child Trends, Inc., and the National Institute of Child Health and Human Development's Family and Child Well-being Research Network collaborated to develop the content of the adolescent self-administered questionnaire (SAQ). Adolescence is a time when youths develop the skills and characteristics that increase or decrease the risk of intergenerational dependency. We know it is important

to interview adolescents about their own behaviors because adolescents are often more knowledgeable about their own activities and perceptions than their parents are and collecting data directly from the adolescent will likely improve measurement of these concepts (see Moore and Miller, 1997). Provided below is a list of the content areas included in the adolescent questionnaire.

- 1. Housework and chores; family routines
- 2. Parent-child relationships
- 3. Parental monitoring
- 4. Contact with absent parents
- 5. School engagement
- 6. Problem behaviors and substance abuse
- 7. Knowledge of and attitude towards welfare regulations
- 8. Dating, early sexual initiation, contraception, and childbearing

The adolescent SAQ contains potentially sensitive questions on delinquency, alcohol and drug use, sexual activity and contraception. Protecting the privacy of adolescents was viewed as essential in designing this part of the survey. The questionnaire format and procedures mirror those used in the 1992 Youth Behavior Survey (YBS), which asked similar types of questions (see Klein, et al. 1993). Adolescents who are home at the time the Census Bureau Field Representative (FR) visits the household will be administered the survey through an audio-cassette player and fill out an answer booklet while listening to the tape. The answer booklet contains only the answers and not the questions. Upon completion, the adolescent is instructed to place the answer booklet in the envelope provided and seal it before returning it to the FR. These procedures are used to give adolescents the greatest sense of privacy and to ensure that privacy will not be compromised if someone in the household were to see the answer booklet. We also developed a separate booklet that contains the survey questions only. This booklet will be shown to parents who request to see the questionnaire. For privacy reasons, the questions are in a different order than those on the tape.

Due to cost considerations, for adolescents not available at the time of the personal visit, FRs did not make callbacks to administer the adolescent SAQ in person. Instead they were instructed to conduct the interview by phone. (This same procedure will be used

during actual administration of the survey as well.) We developed a second answer booklet that included both the survey questions and the response categories for FRs to use during telephone administration. To protect the privacy of the adolescent during telephone administration, we modified the questionnaire to ensure that answers provided would not reveal the content of the question asked.

In addition to privacy concerns, our decision to use an audio-cassette recorder to administer the questions was also fostered by concerns about literacy, especially among younger adolescents. Based on results from the YBS, we recorded two different versions of the audio-cassette tape, and included respondent debriefing questions at the end of the pretest questionnaire regarding tape preference (see III. Evaluation Methodologies, B. Field Pretest below for more details).²

III. Evaluation Methodologies

We used various questionnaire evaluation methodologies to evaluated respondent understanding of questions, item sensitivity and task difficulty. These included cognitive interviews and field pretest respondent debriefings. Several issues about the adolescnet SAQ concerned staff at the Census Bureau and other government agencies. Would the adolescents be willing to answer questions on these various topics and, more importantly, would their parents agree to the child being interviewed? Would the adolescents, particularly the younger ones, understand the questions and be able to perform the task? Would the interview hold the adolescents' attention for the 20 - 30 minute survey administration? Would the adolescents have privacy concerns and would they be comfortable answering the questions? We addressed these concerns during laboratory cognitive testing and a field pretest, as described below.

A. Cognitive Interviews

We conducted 10 cognitive think-aloud interviews with adolescents ages 12-17 from June-July 1997, using the version of the SAQ designed to be administered by audio-cassette recorder. The objectives of the test included evaluating question understanding, task difficulty, and question sensitivity. To address the first two of these objectives, we conducted interviewer-administered interviews and instructed respondents to "think-aloud" as they answered the questions. Although this method of administration does not mirror the field administration by audio cassette recorder, we believed that administering the questionnaire by audio-cassette recorder followed by cognitive probing questions would jeopardize our ability to adequately evaluate question understanding and task difficulty.

Three researchers at the Census Bureau's Center for Survey Methods Research (CSMR) conducted the interviews. To ensure comparability across interviews, we developed a protocol beforehand that included additional probing questions to be used at the researcher's discretion if the respondent did not convey the information while thinking aloud or did not convey the information after general probes such as, "Could you tell me more about that?" At the end of the protocol we included a few debriefing questions regarding question difficulty and question sensitivity. Adolescents were paid \$25 for their participation and interviews lasted from 60-90 minutes. Most interviews were conducted at CSMR's cognitive laboratory, but some were conducted at sites more convenient for respondents. As described in a later section, revisions were made as a result of insights from these cognitive interviews and the questionnaire was then field pretested.

B. Field Pretest

A field pretest of the SPD was conducted from October 6-22, 1997 in areas from four Census Bureau Regional Offices: Boston, Kansas City, Los Angeles, and Atlanta. The pretest sample was selected from expired March 1996 Current Population Survey interviewed households and was oversampled for low income households. FRs were required to obtain parental consent before conducting the interview with an adolescent. The purpose of the pretest with regard to the adolescent questionnaire was to evaluate the survey instrument, as well as logistical, operational, and procedural aspects of the survey. A total of 66 questionnaires were received at Census Bureau Headquarters.

As mentioned previously, we recorded two different versions of the tape: one in which the answer categories were read for every question, and a second in which the answer categories were read only the first time a series of questions with the same response categories was asked. Two of the Census Regional Offices received one version of the tape and the other two offices received the other version. We included debriefing questions at the end of the survey to assess the pace of the tape, whether there was adequate time to mark the answer sheet, and preference for the reading of the answer categories. In addition we asked whether privacy concerns would have been raised had we included the questions in the answer booklet (alleviating the need for the audio cassette recorder), the adolescent's ability to concentrate throughout the 30-minute interview, the respondent's level of interest in the survey, and his/her level of comfort answering selected series of potentially sensitive questions.

Staff at Child Trends, Inc. analyzed the frequency of responses such as "don't know," "not applicable," and no

response to allow us to identify questions that the respondents had trouble understanding or felt uncomfortable answering. In addition, they examined whether respondents failed to finish filling out the questionnaire, which may indicate that the questionnaire is too lengthy for the respondent's attention span (results presented below).

IV. Results

A. Cognitive Interviews

From the cognitive interviews, we found that the adolescents participating in this study were able to think aloud while answering survey questions, to concentrate during the lengthy cognitive interview, and to provide valuable information that we used to modify the survey instrument. Below are a few examples of the types of problems uncovered during the cognitive interviews and a brief description of the resulting revision that was made to the questionnaire.

 Respondents tended to ignore reference periods included in the questions. For example, the questionnaire included a series of questions on parental monitoring of activities such as staying out late, TV viewing, and friends. For each topic, we asked who set the limits on these activities, and a question on breaking the limits:

"In the past 30 days, how many times have you broken the limits about how late you stay out at night?"

Never One or two times Several times Often

During cognitive testing, we found that adolescents tended to ignore the reference period and answer the question for whatever reference period was relevant to them. In some cases, they reported events that happened outside the reference period, in other cases, they reported what was "usual" for them. That is, they responded that they don't usually stay out late. In an effort to keep the respondent focused on the reference period, we revised the questionnaire to include all reference periods in the response options:

"How often have you broken the limits about how late you stay out at night?"

Never in the past month
One or two times in the past month
Once a week
Several times a week
Everyday or almost everyday in the
past month

The questionnaire included a series of questions on contact and communication with non-residential parents (e.g., talking on the phone, receiving a card or letter, seeing, staying overnight). These questions were framed in terms of a "typical month." For example, "In a typical month, about how many times do you see your outside parent? Please write the number of times in the answer booklet." Respondents had great difficulty reporting their contact with their absent parent in terms of a "typical month." They tended to report the last time the event happened if it was infrequent, or over report, by guessing, if the event occurred frequently. We revised these questions to ask "how often" the event happens and included categorical response categories as shown below:

"How often do you see your outside parents?

Never
Once or twice a year
Several times a year, but less than once a month
Once or twice a month
Once a week
Several times a week
Everyday or almost everyday

This format allows respondents who have irregular or less frequent contact with their outside parent during the year to indicate the appropriate frequency of contact without forcing them to try to fit their level of contact into a "typical month" situation.

3. The series of questions on attitudes toward welfare included a response scale ranging from "strongly agree" to "strongly disagree" with a middle category of "I'm in the middle." For example:

"Welfare encourages young women to have babies before marriage."

Strongly disagree Disagree I'm in the middle Agree Strongly agree

We found that respondents used the middle category for two purposes: 1) to indicate that they both agreed and disagreed with the statement and 2) to indicate that they didn't know or didn't have an opinion about the statement. We revised these questions to include a specific "don't know" category, so that we can differentiate those who have opinions from those who don't.

4. There was great concern that the questions about delinquent behaviors, alcohol and drug use, dating and sexual activity would be highly sensitive. Contrary to expectations, only one respondent said he/she was uncomfortable answering one of the sex questions when asked about comfort level with the survey content at the end of the cognitive interview. Some respondents indicated they would be more comfortable using the procedure that will actually be used for the survey (answering the questions privately by listening to a cassette player and marking an answer sheet), rather than responding to an interviewer as was done in cognitive testing.

B. Field Pretest Results

A total of 66 adolescent questionnaires from the field pretest were received at Headquarters (see Richter, et al., 1997 for a complete summary). Of these, 60 were completed questionnaires, 3 were parental refusals, 1 was an adolescent refusal, and 2 were disabled adolescents who were unable to participate in the survey. Thirty-four of the pretest cases were completed using the audio cassette recorder, with the remainder conducted by phone from a FR's home.

There were two sets of respondent debriefing questions included in the pretest. The first set concerned reactions to the audio cassette player (response categories always read versus sometimes read), and applied only to respondents who completed a self-administered questionnaire. The second set of questions concerned difficulty concentrating on the questionnaire, how interesting respondents thought the survey was, and whether respondents felt uncomfortable answering any sections of the questionnaire. These were asked of everyone, regardless of the mode of administration.

1. Debriefing questions on the audio-cassette player

Of the 34 respondents who completed the survey using the audio cassette player, only 20 (59%) completed the debriefing questions. Of the 14 cases who skipped these questions, 10 were under the age of 14. It is likely that these respondents missed the debriefing questions because they were placed after the questions on sex and contraception, which the younger respondents were instructed to skip over. Of the 20 respondents who answered the debriefing questions about the tape, 12 received the "long tape" (32 minutes) where all of the answer categories were read out loud; 8 received the "short tape" (29 minutes) where answer categories were not repeated if they were the same as the previous question.

There was a mix of opinions on whether respondents preferred that all, some, or none of the answer categories be read on the tape: 45% said "all", 40% said "some" and 15% said "none". All of those (N=3) who said "none" were age 14 or older. Of the 8 respondents who got the shorter tape, 5 of them said that they would have preferred to have all of the categories read. But of the 12 respondents who got the longer tape, 8 of them said they would have liked to have some or none of the categories read. These mixed results indicate that a middle length tape is the best solution, where answer categories are read each time that they change and then repeated every few questions.

The audio-cassette administration of the adolescent questionnaire (with only response categories in the answer booklet) was done to protect the adolescents' privacy. An alternative would be to include both the questions and answers in a self-administered questionnaire. Below is the debriefing question and the distribution of responses obtained during the pretest regarding concerns about privacy if the mode of administration had been different:

"By providing the questions on tape instead of in the answer booklet, we tried to protect the privacy of your answers. This was done so that if someone saw your answer booklet, they would not know what questions the answers pertained to. If we had not used the tape, but instead, included the questions in the answer booklet, how concerned would you have been that someone could have seen your answers and the questions they applied to?"

	Frequency	Percent
Extremely concerned	4	20.0
Very concerned	4	20.0
Somewhat concerned	8	40.0
Not very concerned	2	10.0
Not concerned at all	2	10.0
Total	20	100.0

The results suggest that a large proportion of the respondents would be more concerned about their privacy if the questions were included in the answer booklet, indicating that the tape does increase adolescents' sense of privacy.

2. Debriefing questions concerning difficulty concentrating, interest in survey, and discomfort at sensitive questions

Fifty-one respondents (85%) answered the nine respondent debriefing questions on difficulty concentrating, interest in the survey and level of comfort answering potentially sensitive questions.

Most respondents (67%) said that it was not at all difficult to concentrate on the questionnaire, with an additional 28% saying that it was a little difficult. Younger respondents were slightly more likely to have at least a little difficulty (37% vs. 31%), but the difference was not significant. Of those who said they found it was "somewhat" or "very" difficult to concentrate, I received the short tape and 2 received the long tape.

Table 1 summarizes the results of the questions on whether respondents felt uncomfortable in responding to sensitive questions.

Table 1. Responses to debriefing questions on discomfort

with sensitive questions

with sensitive questions					
Questionnaire section	Percent "not at all uncom- fortable"	Percent "very uncom- fortable"	Mean level of discom- fort*	(N)	
Relationship with parents	68.0	8.0	0.60	50	
Nonresident- ial parents	77.8	3.7	0.41	27	
Running away; stealing	68.6	2.0	0.49	51	
Cigarettes, alcohol	74.5	5.9	0.45	51	
Welfare attitudes	77.1	4.2	0.38	48	
Dating	72.0	6.0	0.48	50	
Sex, contraception	61.8	8.8	0.65	34	

^{*} Scale used for level of discomfort: 0=none, 1=a little, 2=somewhat, 3=very.

For the most part, respondents did not express much discomfort with the questionnaire content. The sections

with the highest percentages saying they felt at least a little uncomfortable were relationships with parents; problem behaviors such as running away or stealing; and sex and contraception. Even in sections where some discomfort was expressed, only a few respondents (less than 10%) said they felt "very uncomfortable." For the questions on sex and contraception, for example, on a scale of 0 to 3 where 0 means "not at all uncomfortable" and 3 means "very uncomfortable", the average level of discomfort was 0.65. There were no significant differences in the level of discomfort by age.

One would expect that if respondents felt discomfort with certain sections of the questionnaire, they may have been more likely to leave questions blank in that section. For the most part, very few respondents left questions or sections blank. No blank cases were found for the questions on nonresidential parents (if there was a nonresidential parent) or for attitudes/knowledge about welfare. For the items concerning problem behaviors, the one adolescent who left items blank stated that he or she was "not at all uncomfortable" answering these questions; the same was true for the sections on relationship with father and for substance use.

While some of the sections of the questionnaire made some teens uncomfortable, only a very few said they were "very uncomfortable." In addition, the fact that a section made the respondent uncomfortable did not seem to be related to blank responses in that section; overall, there were few blank responses. The findings suggest that most adolescents are not disturbed by answering questions about sensitive subjects if they feel that their privacy is protected, as has been demonstrated in other national surveys such as the National Longitudinal Survey of Adolescent Heath, National Longitudinal Survey of Youth, and the Youth Behavior Survey.

3. Mode of administration

Slightly more adolescents completed the survey using the audio cassette player than completed it by telephone: 34 interviews (57%) were self-administered and 26 (43%) were conducted by telephone.

An examination of differences in the major independent and dependent variables of interest by administration method (whether self administered or by telephone) revealed for the most part no significant differences. The exception was the questions on smoking; respondents interviewed by telephone were *more* likely to say that they had ever smoked and ever smoked regularly. The reasons for this are unknown.

4. Item non-response and incomplete questionnaires

There were no incomplete questionnaires, that is, questionnaires where a respondent stopped filling out the entire questionnaire at a given point. There were two

cases of break-offs, where a respondent stopped answering a particular section and moved on to the next one. One respondent did not answer the questions on problem behaviors (running away, fighting, damaging property and stealing); this was a telephone interview. One respondent did not answer the questions on alcohol, marijuana, and other drugs, after answering the questions on cigarettes; this was a self-administered questionnaire.

The sections on dating and sex/contraception also contained few blank responses. All 37 adolescents who were old enough to answer the sex/contraception section answered the question on whether they had ever had intercourse. The 25 respondents who had never had intercourse all answered the question on why they had never done so, often giving multiple responses. Of the 12 adolescents who answered "yes" to the question on whether they had ever had intercourse, there were a few blank responses in the succeeding questions.

V. Conclusions

Results from our cognitive tests indicate that adolescents are able to think aloud while answering survey questions and provide valuable information that can be used to improve question wording and response categories. Evidence from the field pretest -- including low refusal rates and high parental consent -- indicates that adolescents are willing to participate in sensitive-topic surveys and that their parents also consent to such activity.

Based on respondent debriefing questions from the cognitive interviews and the field pretest, as well as analysis of response patterns, question sensitivity and length of the interview seem to have been of minimal concern to respondents. The respondent debriefing questions indicated that adolescents had little trouble concentrating throughout the survey. Although some sections of the questionnaire were more sensitive than others, less than 10 percent of respondents indicated they were "very uncomfortable" in the most sensitive section of the questionnaire (potentially sensitive topics included relationship with parents; contact with nonresidential parents; running away and stealing; cigarette and alcohol use; welfare attitudes and knowledge; dating; and sex and contraception). Moreover, there were no incomplete questionnaires and item non-response was minimal even in potentially sensitive sections.

Responses to the debriefing questions indicated mixed results with regard to reading answer categories on the tape. The optimal strategy, based on our results, may be to read the answer categories the first time they are used in a series and every few questions thereafter. This will allow respondents adequate time to fill in the answer boxes, without the tape being too tiresome and repetitive.

Adolescents who answered using the self-

administered questionnaire indicated that they would be concerned that someone might see their answers if the questions and answers were included in the questionnaire. As intended, administering the survey through an audio cassette player increased their sense of privacy. Based on examination of the pretest data, the mode of administration had little impact on the distribution of responses, indicating that data quality would not be affected by mode of administration as long as adolescents do not feel their privacy is jeopardized.

Endnotes

- 1. This paper reports the results of research and analysis undertaken by Census Bureau staff. It has undergone a more limited review than official Census Bureau publications. This report is released to inform interested parties of research and to encourage discussion.
- All questions and answer categories were read twice in the YBS. According to Field Representatives' reports, adolescents indicated that the repetition bored them and slowed down the interview (Klein, et. al., 1993).

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