COLLECTING INFORMATION FROM TEENAGERS: EXPERIENCES FROM THE COGNITIVE LAB

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The Questionnaire Design Research Laboratory (QDRL) was established at the National Center for Health Statistics (NCHS) in 1986. The laboratory uses cognitive interviewing techniques to pretest survey questionnaires in order to uncover sources of response error. The general utility of cognitive laboratory methods for pretesting questionnaires intended for adults has been well documented (Jobe and Mingay, 1991; Willis, Royston, and Bercini, 1991; Dippo 1989). However, the usefulness of these methods, when applied to teenagers, has not been well established (but see Holland and Willis, 1991).

This paper describes testing that took place for the 1993 Teenage Attitudes and Practices Survey II, a telephone follow-up study designed to provide data on teenage smoking behavior. We discuss the adaptation of cognitive interviewing methods for this age group, detail some specific questionnaire changes that occurred as a result of laboratory testing, and indicate some general cognitive issues that we believe are associated with the development of questionnaires intended for teenage respondents. Although this paper describes some specifics about the TAPS II, the focus is geared towards specific issues involved with interviewing teenagers in general.

The TAPS II was a follow-up study to the original Teenage Attitudes and Practices Survey, administered in 1989. It includes a wide variety of questions related to teenage smoking, and risk factors associated with teenage smoking. The TAPS II reinterviewed respondents to the 1989 TAPS, who were between the ages of 16 - 21 at the time of the follow-up interview. The Taps II also includes a new cohort of teens ages 10-15 (for purposes of presentation, we will refer to all survey respondents as 'teens').

The TAPS II provided a unique challenge to the QDRL because the questionnaire was designed to be administered to a population that was different from those which had been tested in the past, and which also exhibited a very wide age range (young people between the ages of 10 and 21).

METHOD

Recruitment

The recruitment for the development and testing of the TAPS II questionnaire departed from our normal procedures in several ways. First, we needed to obtain parental consent for subjects under the age of 18. Second, we could not rely completely on our usual recruitment methods, such as newspaper advertisements and flyers, because teens, and especially younger ones, do not tend to read these (see Stein, 1992, for more information on subject recruitment).

Because our time frame for testing and development was limited, we obtained younger subjects by recruiting children of NCHS employees for the first several rounds of testing. We found these interviews to be very useful, but obtained very few individuals who smoked. Therefore, we later placed an advertisement in a university student newspaper in order to obtain older subjects (age 17-21) who smoke cigarettes.

Interviewing Techniques

A total of 41 cognitive interviews were completed, of a nearly equal number of males and females. From the available data, 66 percent of the teens were white, 22 percent were black, and 5 percent were hispanic. The age distribution was fairly balanced with equal numbers across the 10 - 21 age range. Interviewers consisted of NCHS staff from the QDRL, as well as from the Division of Health Interview Statistics.

Subjects were paid $30 for a one-hour interview. At the onset of the interview, the teenager was given a brief explanation of the purpose of the interview, and asked to speak freely about any thoughts that came to mind during the course of the interview. One of four experienced cognitive interviewers interviewed each subject individually, using the methods described in Willis, Royston, and Bercini (1991) to obtain verbal reports from laboratory subjects.

RESULTS

Mechanics of testing younger individuals

We found that our traditional cognitive interviewing techniques needed to be modified when interviewing teenage respondents. Our usual techniques include intensive probing, and asking the subject to think aloud while responding. These techniques were not as effective with the younger respondents as they are with adults for the following reasons: (1) The sensitivity of the topic made intensive probing on some questions inappropriate for young respondents, and (2) Most teenage respondents lacked the ability or the motivation to spontaneously articulate their thought processes.

Because the teens were not particularly forthcoming in their responses, extensive probing was used for the questions that were not very sensitive, such as questions related to school and family. For sensitive questions related to smoking behavior, probes were more indirect in nature and not as intensive. For example, instead of asking whether the teenage subject had engaged in a particular behavior that he or she might not want to admit to, we instead asked whether they thought that "kids your age would answer the question truthfully".

However, even for non-sensitive questions, a high proportion of our laboratory subjects tended to answer our probe questions with single word responses, and failed to elaborate on the basis for their answers unless prompted several times. It appeared that these individuals were prepared only to provide the minimal verbal responses necessary to complete the task, as they interpreted it.

Specific Results of Laboratory testing

Questions that possessed unique problems for teenage respondents tended to fall into the following categories: (1) Questions that presented comprehension problems for teenagers due to question length and complexity, (2) Questions that presented recall difficulties, and (3) Questions that assumed a value system that was not shared between the survey takers and respondents.

Comprehension Problems:

Younger respondents do not interpret certain common terms appropriately. In the following question, the word, "slogan" was not understood by the younger teens, and so "ad" was used instead in the final version.

Example 1

Version 1: *For the following advertising slogans, please tell me which products, if any, come to mind when you hear the slogan.*

Final: *These first questions are about different kinds of products. For each ad I read to you, please tell me which products, if any, come to mind when you hear the ad.*

As a second example, the term "religious services" was not understood by younger teens. By adding examples in the final version, the younger teens were able to answer the question. Additionally, the teenagers had difficulty translating an interval, such as once a month, into a general category, such as sometimes. Therefore, the response categories were changed from general categories - often, sometimes, rarely, or never, to specific categories - never, a few times a year, etc. By changing the categories to specific intervals, the teens were able to make a concrete frequency judgment, rather than one that is fairly abstract in nature.

Example 2

Version 1: *How often do you attend religious services... would you say often, sometimes, rarely, or never?*

Final: *On the average, how often in the last year have you gone to church, synagog, or some other type of religious service?*

[] never
[] a few times a year
[] once or twice a month
[] weekly/almost weekly
[] more than once a week

Example 3 provides a comprehension problem in which the teens did not interpret the phrase "fun or recreation" as was intended. Probing revealed that teens included team sports such as after-school sports and activities in their answer to version 1. Because the objective of the question was to find out about unsupervised time, the final version, asked about "going out with friends just to have fun", rather than "going out for fun or recreation".

Example 3

Version 1: *Including Saturdays and Sundays, how many nights a week do you usually go out for fun or recreation?*

Final Version: *Including Saturdays and Sundays, how many nights a week do you go out with friends just to have fun?*

Recall Strategy:
Younger respondents tended not to focus on the reference period given in some questions, and do not appear to appreciate the importance of this reference period from a survey measurement point of view. That is, when asked questions on the total number of times they have engaged in a certain activity, they tended not to provide different responses for reference periods that differ markedly, such as, for example, the last month, versus the last six months.

Value systems:
Some questions had different meanings to young people than they do to the adult questionnaire designer. For example, several of the teenagers responded "Very concerned" when asked the question: "How concerned are kids your age about drinking and driving". However, further probing revealed that these individuals meant that kids are very concerned about getting caught, which clearly was not the intent of the question.

DISCUSSION

Based on our observations, we make several recommendations concerning the ways in which cognitive interviews should be conducted with young respondents, and the manner in which survey questions intended for administration to this group should be formulated. In particular:

1) Pay attention to subjects' comfort level.
In writing and in testing of survey questions, we need to determine whether particular items are sensitive to young subjects, especially if parents may have access to the information provided. In particular, one can examine issues of sensitivity associated with the asking of particular questions without necessarily asking those questions directly, but rather relying on a more "indirect" approach, and by focusing more on term comprehension than on recall of actual behavior.

2) Attend to non-verbal communication.
Young subjects will not always verbally articulate their thoughts, but give indications otherwise that they are uneasy, confused, or distracted. This also implies that in writing survey questions for teens, we must be sure to use very simple language and question syntax, because the subject will often not indicate to the field interviewer when he or she does not understand the questions.

3) Probe extensively on non-sensitive items.
The cognitive interviewer must accept the burden of asking a number of spontaneous verbal probes, and in forcing the subject to reconcile conflicting statements. Through these probing techniques, investigators can determine where covert sources of potential response error may exist.

REFERENCES

Jobe, J. B. & Mingay, D. J. (1991). Cognition and survey Measurement: History and overview. Applied Cognitive Psychology, 5, 175-192.

Stein, B. J. (1992, May). Subject recruitment and management of a questionnaire design research laboratory. Paper presented at the Field Directors Conference, St. Petersburg, Florida.

Willis, G. B., Royston, T., & Bercini, D. (1991). The use of verbal report methods in the development and testing of survey questionnaires. Applied Cognitive Psychology, 5, 251-267.

Holland, L., & Willis, G. (1991, May). Innovative Pretesting Methods for Surveys of Adolescent Populations. Paper presented at the Field Director's Conference, San Diego.

Dippo, C. (1989). The use of cognitive laboratory techniques for investigating memory retrieval errors in retrospective surveys. Proceedings of the International Association of Survey Statisticians, International Statistical Institute, pp. 323-342.