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TRENDS IN DATA COLLECTION METHODS

Phone or Face-to-Face? Comparing Data from Surveys of People with Disabilities

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Face-to-face interviewing generally yields higher response rates than other modes by increasing opportunities to locate sample members and offering them the convenience of being interviewed at home or in another setting. Providing opportunities to be interviewed face-to-face may be important for people with disabilities, whose impairments may preclude them from completing an interview by telephone or mail. For the National Beneficiary Survey (NBS), a survey of people with mental and physical impairments, Mathematica proposed a dual mode design in which computer-assisted telephone interviewing (CATI) attempts would be made prior to computer-assisted personal interviewing (CAPI). To ensure that the quality of data collected in each mode was similar, we compared data collected via CATI and CAPI on a variety of quality measures.

Multi-Mode Surveys: Rewards and Risks

The multimode design of the NBS provided significant cost savings over a CAPI-only design, improved accessibility to beneficiaries, and resulted in significantly higher response rates than could be achieved with a CATI-only study. To minimize mode effects, the instrument was identical in each mode and both modes were administered by an interviewer. However, with any multimode design, there is a risk that different data collection modes may not produce equivalent results (Lyberg and Kasprzyk 1991).

Telephone and face-to-face interviews are similar in many ways, because they both involve an interviewer, but they are different in the channels of communication available to the interviewer and respondent

ABOUT THE STUDY

Conducted by Mathematica for the Social Security Administration (SSA), the NBS is a nationally representative survey of 18- to 64-year-old disability beneficiaries. The 45-minute, multimode (CATI/CAPI) questionnaire gathers information about health, insurance, employment, income, and demographic characteristics. We first attempted to conduct interviews by telephone. Face-to-face interviews were then pursued with people who could not be located, requested or required an in-person interview, were evasive to telephone attempts, or refused to participate by phone. A total of 7,603 cases were completed, including 23 partial interviews, for an overall response rate of 77 percent. Of these, 6,302 were completed by phone and 1,301 in person.

Because of differences in the characteristics of beneficiaries who responded via CATI and CAPI, we used one-to-one matching to identify comparable groups of sample members who completed the survey on the phone or face-to-face to examine potential differences in data quality. Cases were matched by age at interview, race, ethnicity, sex, benefit type (SSI, SSDI or both SSI and SSDI), and SSA impairment type from administrative records. This process yielded 772 total cases equally split between telephone and face-to-face respondents. All analyses used unweighted cases.

(de Leeuw 2005). Because face-to-face interviewers are physically present, there is more opportunity to develop rapport and maintain the respondent's interest and motivation, characteristics that can affect willingness to focus on the interview or discuss sensitive information. The face-to-face format also allows interviewers to read and use body language to pick up on respondent confusion or frustration, making it possible to clarify or give the respondent more time to understand complex questions. These factors may improve the accuracy of the data being collected while also helping minimize item nonresponse and may be particularly important for people with physical and mental impairments (Krosnick et al. 2002).

Despite this, few studies have found that responses to nonthreatening questions differ by mode of administration. However, there is some evidence of differences in data quality between modes for specific types of items. For example, responses to open-ended questions often include less information in telephone interviews, compared to face-to-face interviews. Telephone respondents often display more acquiescence, or the tendency to answer “yes” and agree with an item regardless of its content, choose more extreme categories, refuse more items, and display more evidence of recency effects than face-to-face respondents (Jordan et al. 1980; Locander and Burton 1976).

Our study compared data collected in telephone and face-to-face modes to determine if there were differences in data quality by mode for selected items. If telephone interviewing poses a greater cognitive challenge, it may lead to more satisficing behavior than face-to-face interviewing for this population. Therefore, we tested the hypothesis that data collected face-to-face would be of higher quality than that collected via telephone for particular items.

Measuring Quality

We measured item nonresponse by looking at the number of questions that respondents were unwilling or unable to answer for key individual items. We also created variables that measured whether any response for a select series of questions was missing. We assessed social desirability, or the willingness to admit holding undesirable opinions or report undesirable behaviors, by looking at responses to questions about sensitive social information, such as work goals, alcohol and drug use, and income. We determined the incidence of nondifferentiation, or failing to distinguish between different questions and selecting the same answer choice for all or almost all similar questions, by looking at whether a respondent chose the same response option for a series of questions. Finally, we analyzed the rate of acquiescence for a series of questions about awareness of SSA programs.

Weighing the Results

Overall, we found minimal evidence of differences in data quality by mode. We found no difference between face-to-face and telephone interviews in the amount of nondifferentiation, and limited evidence

of differences in item nonresponse, social desirability, and acquiescence. However, data collected in person had lower item nonresponse, and we found less evidence of socially desirable responses and acquiescence in CAPI, results that are consistent with the literature. In general, items that were vague or demanded more cognitive processing (for example, questions about behavior in the future) showed the greatest differences by mode. Factual questions about behavior (such as program use) showed little or no mode effects.

Although telephone and face-to-face interviewing produced comparable data quality for this survey, survey designers should consider the interplay of question content, data collection mode, and characteristics of the population being studied. Specifically, in studies of people with mental or physical disabilities and cognitive limitations, questions that are complex, have potentially socially desirable responses, are subjective, or vague may not be appropriate, particularly in a telephone survey. A more rigorous study of these methodologies, including random assignment to mode, is needed to clarify these issues. A future experiment, built into the NBS, will randomly assign sample members to a CAPI-only treatment group so that differences that may not have been controlled for in this matched comparison group design can be more definitively attributed to interview mode.

For more information on this survey, contact Matt Sloan at (202) 484-4826, or msloan@mathematica-mpr.com. Mathematica® is a registered trademark of Mathematica Policy Research, Inc.

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