

The Disability Questions Tests 2008/2009 File contains five calendar quarters of person-level data collected via a field test of six disability questions that were developed for use on the American Community Survey (ACS). These questions were a supplement on the National Health Interview Survey (NHIS), at the end of the Family Core, beginning in October 2008 and running through December 2009. The field test was one component of a larger testing effort to develop and adopt a standard set of disability questions to be used with multiple surveys in multiple countries (<http://www.cdc.gov/nchs/citygroup.htm>). The ACS question set has also been included in the Current Population Survey (CPS), but there are differences in how the questions are administered. The NHIS supplement was conducted using a split-ballot format, with half of the NHIS families receiving the questions as they are administered on the ACS and the other half as they are administered on the CPS.

More information on the development of the questions, the test, and the data file is provided below. In addition, links to the data file, associated documentation (variable summary, variable layout, variable frequencies), and sample input programs are provided on the NHIS Website at: <http://www.cdc.gov/nchs/nhis/disabilityquestionstests20082009.htm>.

Background

The U. S. Census has a history of including questions about disability to satisfy a variety of stakeholder needs. The 2000 Census of Population and the 2000-2007 questionnaires of the Census Bureau's American Community Survey included six disability questions: a combined sensory (vision and hearing) question; separate mobility, self-care, and cognition questions; and two independent living questions (based on daily activities and working). Before each decennial census, other agencies and researchers join with the Census Bureau to develop survey questions most appropriate for their needs and to determine if existing questions need modification. The user community had expressed some dissatisfaction with the disability measures on the 2000 Census and 2000-2007 ACS. Thus, in preparation for the ACS Content Test, the Census Bureau and other stakeholder agencies took the opportunity to refine the disability questions to bring them into line with recent changes in the definition of disability and the conceptualization of the components of that definition. A work group was formed under the auspices of the Office of Management and Budget and led by the National Center for Health Statistics (NCHS). That work group researched the theoretical approach to the definitions based on the latest national and international ideas about disability, analyzed available data to test their conceptualizations, identified and examined agency mandates for collecting disability data, discussed question content and wording, and sponsored cognitive testing of a new question set. The modified disability questions were subsequently tested in the ACS Content Test of 2006, along with other question additions and modifications (Brault et al., 2007).

The underlying concept behind the choice of questions was to identify the subpopulation that is at a greater risk than the general population of experiencing restrictions in social participation, for example, restrictions in employment, education, or civic life. The objective was thus to measure equalization of opportunities. Four basic domains of functioning (vision, hearing, mobility, and cognitive functioning) were identified that would define the largest component of

the population of people with disabilities. These four domains could be used individually or combined in order to assess equalization of opportunities for people with disabilities. Also, two more domains were identified that could be used for monitoring independent living and the need for services: the ability to take care of oneself (self care, in particular, the ability to bathe and dress oneself), and the ability to move around the community (independent living, in particular, the ability to visit a doctor's office or go shopping). The new set included separate questions for vision and hearing, refined the mobility question, expanded the cognitive functioning question, continued the inclusion of a self-care question, and improved the question on independent living. The question about work, which had been included in earlier censuses, was not retained.

The 2006 ACS Content Test was a test of the modified questions, with the results of that testing used to inform the content for the 2008 ACS. The Content Test compared two sets of disability questions: the then current ACS set (called the "control questions"), and a set recommended by the work group (called the "test questions"). A formal evaluation of those two versions of the disability questions was completed and the results used to make the decision to adopt the modified questions for the 2008 ACS. See Brault et al. (2007) for a report on the 2006 Content Test.

Over the past decade, the Bureau of Labor Statistics had also been developing a set of disability questions for its Current Population Survey. Although that research initially resulted in a question set that was different from the ACS questions, it was decided starting in early 2008 to add a slightly modified version of the ACS disability question set to the CPS. The intention was to use the data to publish employment rates for people with disabilities.

Split-Ballot Test

With the ACS and CPS now using a standard set of disability questions, analysis of the characteristics of the questions and evaluation of differences in the estimates is critical to the federal statistical system. Note that the ACS questionnaire includes the questions on a person level, and the CPS questionnaire includes the questions on a family level. Considering these differences, NCHS conducted a split-ballot test of the questions, with each NHIS family randomly assigned (using a random number generator within the survey instrument) to one of two equally likely administrations. The first used a family-style approach (e.g., "Anyone? Who is it?") consistent with the CPS. The following is an example:

"[Are you/Is anyone] deaf or [do you/does anyone] have serious difficulty hearing?" If the answer is "yes": *"Who is it?"*

The second approach, more consistent with the format adopted with the ACS, asked the disability questions on a person-by-person basis. The following is an example:

"Is <person name> deaf or does <person name> have serious difficulty hearing?" The question is repeated for each eligible person.

The questions appeared at the end of the NHIS Family Core, just after the Income and Assets (FIN) section. (NOTE: The person-style questions have been retained in this location for 2010

and are being asked of one-half of participating families.) For more information on question wording and differences across the two administration approaches, please access the Variable Layout for the file. Also, the variable FDRN_FLG has been included in the data file to indicate which of the two question administrations each family received.

Analysis, Merging with Health Data Files, and Weights

Analysis of the test data will provide essential information about the nature of the questions and inform development of future improvements. Analysts, for example, can perform cross-survey comparisons of disability prevalence rates: NHIS family-style approach compared to the CPS, and NHIS person-by-person approach compared to the ACS. Results may provide insights into possible survey context effects on estimates of disability. And, of course, the NHIS split-ballot test permits analysis of the impact of question administration (family-style approach versus person-by-person approach) on prevalence rates of disability and data quality (e.g., comparisons of item nonresponse to the test questions).

Many NHIS analysts will want to produce estimates and perform comparisons within key subgroups such as age, sex, and race/ethnicity. This requires merging the Disability Questions Tests 2008/2009 File with one or more health data files. If the analyst chooses to use all five quarters of data included on the Disability Questions Tests 2008/2009 File, merging with health data files will involve two steps. First, 2008 and 2009 health data will need to be combined. And second, the combined or concatenated health data file will need to be merged with the Disability Questions Tests 2008/2009 File. Information on combining multiple years of data and merging data files can be found in Appendix VI of the [2009 NHIS Survey Description](#) document.

Finally, the weight WT5Q_DIS provided with the Disability Questions Tests 2008/2009 File is designed to produce annual-level estimates calculated from all five calendar quarters of data included in the file. If a data user would like to use the data in this file to prepare separate estimates for 2008 and 2009, the following adjustment factors should be applied to WT5Q_DIS:

2008 weights when analyzing data from quarter 4 of 2008: multiply WT5Q_DIS by 5.

2009 weights when analyzing data for all of 2009: multiply WT5Q_DIS by 5/4.

Reference

Brault, Matthew; Stern, Sharon; and Raglin, David (2007). Evaluation Report Covering Disability. 2006 American Community Survey Content Test Report P.4. U.S. Census Bureau. Available at http://www.census.gov/acs/www/AdvMeth/content_test/P4_Disability.pdf.