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Discussion and Presentation of the Disability Test Results from the Current Population Survey

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By

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Abstract

In accordance with Executive Order 13078, the Bureau of Labor Statistics, in cooperation with the Employment Rate Measurement Methodology interagency workgroup, identified the goal of placing a small set of questions within the Current Population Survey (CPS) to measure disability. A set of potential questions was drawn from existing surveys, cognitively tested, and placed in the National Comorbidity Survey (NCS) for testing. Based on an analysis of the NCS data, a set of seven questions was identified. These seven questions were then cognitively tested to ensure that they would work within the CPS context. This question set was placed in the February 2006 CPS for field testing. The two primary goals of the test were to compare the CPS disability rate to that obtained from the NCS, and to evaluate the effect on CPS response rates in the following month. Analysis of the test data revealed a lower overall disability rate as measured in the CPS than in the NCS, with lower positive response rates for each question. The data did not indicate that there was an adverse effect on the response rates for households that had received the disability questions.

1. Overview

The Current Population Survey (CPS) has never contained questions that were designed or intended to measure disability¹. This paper begins by describing a process designed to identify and thoroughly test a set of questions that can be placed in the CPS in order to provide an accurate and timely measure of the employment rate of people with disabilities. The results and analysis of recent field testing constitute the latter portion of this paper. The disability test results from the CPS are test findings and should not be considered official BLS estimates of the disabled population, or a substitute for existing disability measures.

On March 13, 1998, Executive Order 13078 established the Presidential Task Force on the Employment of Adults with Disabilities (PTFEAD). This task force was an over-arching organization that provided an operating base for several committees and work groups with mandates specified in the Order. With respect to disability statistics, the Executive Order stated:

The Bureau of Labor Statistics of the Department of Labor and the Census Bureau of the Department of Commerce, in cooperation with the Departments of Education and Health and Human Services, the National Council on Disability, and the President's Committee on the Employment of People with Disabilities shall design and implement a statistically reliable and accurate method to

¹ A complete, in-depth discussion of the question development and testing process can be found on line at: <http://www.bls.gov/ore/pdf/st050190.pdf>

measure the employment rate of adults with disabilities as soon as possible, but no later than the date of termination of the Task Force [September 2002]. Data derived from this methodology shall be published on as frequent a basis as possible.²

The definition of disability given in the Executive Order states "An adult with a disability is a person with a physical or mental impairment that substantially limits at least one major life activity." This definition is the first prong of the Americans with Disabilities Act (ADA) definition. It embraces the view that disability is a function of the interaction between an individual with an impairment and his/her environment.

Pursuant to this mandate, the Task Force established the Employment Rate Measurement Methodology (ERMM) Work Group. About 17 Federal Agencies comprised the ERMM Work Group.

The primary vehicle for collecting labor force data for demographic groups is the Current Population Survey, a monthly survey of about 60,000 households conducted for Bureau of Labor Statistics by the Census Bureau. This survey was chosen as a good instrument for the disability questions for two main reasons. First, since the CPS is a monthly survey, it would satisfy the requirement in the Executive Order to present the data on "as frequent a basis as possible." Second, since the CPS is already the official source of labor force data for various demographic groups, it seemed logical that people with disabilities should be included among these other demographic groups. In order to minimize the impact the addition of these questions would have on the CPS, the ERMM Work Group decided that the question set should be designed with the goal of using as few questions as possible.

Candidate questions were drawn from several major surveys for testing. These questions were first tested in a cognitive laboratory in order to ensure that they were appropriate for the purpose of this effort. Following the cognitive testing, the questions were placed in the National Comorbidity Survey (NCS) for a field test. The NCS is a nationally representative survey that contains extensive questions on mental health and physical well being. The additional information collected in the NCS provided a more complete depiction of the disability status of respondents.

The results from the NCS interviews were analyzed by experts at Rutgers, Harvard, and Indiana University. This analysis produced a disability classification system identifying 24 categories of respondents that could be broadly grouped into those who: A) definitely have a disability, B) probably have a disability, C) possibly have a disability, D) are very unlikely to have a disability, and E) are not worth re-contacting in an attempt to gain further information.

In consultation with BLS staff, the information contained in the 24 categories was used to classify respondents according to the likelihood of disability. Disability is not a clear-cut status by any measure, so there were several borderline cases for whom disability status was difficult to

² Excerpt from "Executive Order 13078: Increasing Employment of Adults With Disabilities," available online at: http://permanent.access.gpo.gov/lps9586/www.dol.gov/dol/_sec/public/programs/ptfead/2000rpt/execorder.htm

determine. Once the more difficult cases were identified, 100 of these respondents were re-contacted to gain further information. The data collected through the re-interviews were combined with the NCS data to create a more complete profile for each respondent. These enhanced profiles were placed into a Delphi process that successfully determined disability status for the majority of the respondents.

After establishing the disability status of the respondents, statistical analysis was conducted to determine which small set of questions could most accurately identify people with disabilities. The accuracy of this small set of questions was gauged through comparison with the disability status established using the full set of information. The analysis used three basic techniques to ascertain the best predictors of disability status: 1) stepwise regression; 2) highest R-squared regressions using all 5-, 6-, and 7-question sets; and 3) a combinatorial approach, comparing the classification accuracy of all 5-, 6-, and 7-question sets.

In order to identify people with disabilities more accurately and minimize the overcount, the question sets were tested to determine the optimal number of positive responses that would be needed to indicate a high probability of a disability. The receiver operator characteristic (ROC) analysis and the classification tree analysis (with the CART program) were used.

The performance of the best sets was evaluated in the following areas:

- a quality index defined as $100 - \text{undercount} - (2 * \text{overcount})$;
- overall accuracy;
- percentage identified as disabled;
- overcount³;
- undercount;
- overcount by demographic characteristics;
- undercount by demographic characteristics.

The question set that best addressed these areas of concern is listed in Appendix A, along with the algorithm that was determined to work best at accurately identifying people with disabilities.

Following the identification of the question set, the seven questions were placed within the CPS instrument and cognitively tested in order to determine if they were understandable within a labor force survey, and to determine if they could be successfully asked in a household format. (The NCS was conducted through personal visits, and there were no proxy respondents.) There were no major problems identified, and the household format worked well in the cognitive tests.

2. Field Test of the Questions in the CPS

³ In the interest of clarity, the terms overcount and undercount used in this paper refer to the following concepts: Overcount – the portion of persons who were identified as *not disabled* using the full set of information collected via the NCS, but were identified as *disabled* using the short question set. Undercount – the portion of persons who were identified as *disabled* using the full set of information collected via the NCS, but were identified as *not disabled* using the short question set.

Whenever a change to the CPS is considered, one of the main concerns of the agencies involved is ensuring that there are as few adverse affects on the CPS response rate as possible. In order to determine what effect the addition of a set of disability questions might have, the disability question set was tested in the February 2006 CPS, in a joint effort between BLS, the Census Bureau, the Office of Disability Employment Policy (ODEP), and the National Institute on Disability and Rehabilitation Research (NIDRR). The test contained the disability question set, which was asked directly after the end of the regular monthly CPS questions. There were two primary goals with the Disability test: to compare the CPS disability rate to that obtained from the NCS and to evaluate the effect on CPS response rates in the following month.

The test used a split-panel design, which included households that were in their first through third or fifth through seventh monthly interviews. Under this design, half of the households were asked the disability questions, while the other half were not asked any additional questions. This design ensured that enough households received the disability questions to provide meaningful data. In addition, differences in the February-March response rate between households that were asked the disability questions and those that were not asked any additional questions could be examined to determine if asking the disability questions adversely affected the likelihood of households continuing to participate in the CPS. In general, we found a lower overall disability rate as measured in the CPS than in the NCS, and there did not seem to be any adverse effect on the response rates for households that had received the disability question. In the next section, we describe some detailed figures and tables from our analysis. In the following section, we discuss some technical details about the construction of the estimates from the CPS, as well as technical issues involved in the comparison of our results to the NCS estimates. In the final section we present the figures and tables.

3. Description of Figures and Tables.

Those households that received the disability questions were asked a series of 7 questions inquiring if anyone in the household over the age of 15 had the condition described in the question, and, if so, who in the household had that condition. These conditions included difficulty hearing, difficulty seeing, limitations of basic physical activities, other physical disabilities, emotional or mental disabilities, difficulty learning, remembering or concentrating, and difficulty participating fully in daily activities. The specific questions that were asked are presented in Appendix A. It should be noted that none of the individual questions have been tested to determine if they accurately identify a sub-category of people with disabilities, and therefore should not be used for this purpose. In addition, the disability test results from the CPS are test findings and should not be considered official BLS estimates of the disabled population, or a substitute for existing disability measures.

To be classified as disabled in our analysis, an individual had to be identified as having difficulty hearing, or difficulty seeing or have answered “Yes” to at least two of the other questions. As was described in the previous section, this algorithm was developed based on the answers to these questions when they were included in the NCS along with the more extensive information collected in the NCS. The algorithm is designed solely to determine whether an individual has a disability or not. Our analysis includes both a comparison of disability rates for various demographic groups between the CPS and the NCS, and an exploration within the CPS

of the responses to each specific question. The CPS labor force concepts included in the following analysis are defined in Appendix B. We restrict our CPS estimates to those age 18 and older, since the NCS data we were using did not include those under the age of 18. In this section we give a more detailed description of each of the figures and tables from our analysis.

Overall Graphs (Figures 1 to 2)

Figure 1. “Yes” Response Rate by Question and Disability (missing excluded)

This figure presents the overall disability rate from the CPS compared to that from the NCS, as well as the “yes” rate for each of the individual questions. The Disability rate for CPS was lower than NCS (10.0% versus 17.6%). The “yes” response rate was lower in the CPS than in the NCS for each of the seven questions as well. However, the largest differences occurred for Questions 6 and 7. Question 6 asks about a condition lasting 3 months or longer that caused difficulties learning, remember, or concentrating. Question 7 asks about a condition lasting 3 months or longer that caused difficulties participating fully in school, housework or other daily activities. In the NCS, 15.2% of respondents had a “yes” recorded for question 6, compared to only 3.7% in the CPS. For question 7, 10.8% of NCS respondents had an answer of “yes” compared to 5.3% of CPS respondents. The proportions of respondents with “yes” recorded to Questions 1 and 2 were relatively close for both the CPS and the NCS, although the proportion of “yes” responses for these two questions was still lower in the CPS than in the NCS. Note that those persons whose disability status could not be determined were classified as “missing” and excluded from the analysis presented in this graph. Further details are presented in Table 2.

Figure 2. “Yes” Response Rate by Question and Disability with CPS Self and Proxy (missing excluded).

This figure augments the information in Figure 1, by also including a “yes” rate for those who were a self reporter, and a “yes” rate for those whose answers were obtained by proxy response. We conducted this additional analysis because all of the NCS data was self reported. In general, the self reporters in the CPS had a slightly higher overall disability rate and “yes” rates to the individual questions than the proxy respondents. Even when the CPS estimates were restricted to those who reported for themselves, the pattern of a lower disability rate and “yes” responses to the individual questions in the CPS compared to the NCS persisted, however.

Sample Comparability (Table 1)

Table 1. Sample Distributions by Demographics (population age 18+).

This table presents a demographic comparison of the NCS sample, the CPS sample, as well as the CPS sample divided into the part that received the disability question and the part that did not. We conducted this analysis to determine if there were any underlying sample differences that might influence our comparisons. Overall, the samples seem very similar, with the NCS having a slightly higher proportion of woman than men. Note that Race and Ethnicity were combined in this analysis rather than using the more common CPS practice of reporting them separately – this was done in order to make a direct comparison with NCS for which we only had the combined classification. In addition, we only present labor force classifications for

the CPS samples, since the labor force classification measure of NCS was not directly comparable to that in the CPS. Based on our analysis of these demographic distributions, we determined that there were no large sample differences between the NCS and the CPS, or within the two halves of the CPS sample for which we needed to control.

Disability and Individual Question Classification Results (Tables 2 to 9)

Table 2 presents disability rates for the CPS and the NCS both overall and for specific demographic groups. Tables 3 through 9 present the “yes” response rate along with the non-response rate for each individual question. In Table 2, disability rates were calculated only for those who we were able to classify as disabled or not disabled using the pre-specified algorithm (responders). For Tables 3 through 9 the “yes” rates were calculated only for those who had an answer to the question recorded. 90% confidence intervals are presented for the CPS estimates, and were computed using the method of generalized replication which is briefly discussed in more detail in the next section. Frequently, we make comparisons between the CPS and the NCS estimates. Care is required, however, in making these comparisons, since we have not included a standard error (or associated confidence interval) for the NCS estimates. The NCS estimates likely have a much larger standard error than those from the CPS, but we were not able to directly compute reliable standard errors for the NCS at the time of our analysis.

Table 2. Disability Rates and CPS Nonresponse rates for Disability (population age 18+).

This table presents disability rates by demographics for the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS disability nonresponse rate in February is presented. Labor force estimates (from the CPS) are presented here as a point of comparison. A detailed comparison of the labor force status of those classified as disabled and those classified as not disabled is discussed at the conclusion of presentation of the estimates.

The CPS disability rate is lower than the NCS rate for every demographic group. The CPS disability rates were strikingly lower than the NCS rates for Women, Hispanics and those 18-34 years old. In each of these groups, the CPS disability rate was less than half of the NCS rate.

In the CPS, households in Month in Sample 1 and 5 are typically interviewed in person at their homes, whereas households in other Months in Sample are typically interviewed over the phone. To ascertain whether there were differences in responses to the disability questions depending on the type of interview and to control for potential conditioning effects that could arise through the repeated interviewing of households, disability rates were estimated for the CPS by Month in Sample status. Based on the results reported in Table 2 for the CPS, there were no discernable differences in disability rates by mode of data collection or the number of times a household has been previously interviewed.

Table 3. Question #1 Rates and CPS Nonresponse Rates for Question #1 (population age 18+).

This table presents “yes” response rates for Question 1 by demographics for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate to this question is presented.

The CPS “yes” rate to Question 1 is slightly lower for all age groups other than those 65 and older. For those who are age 65 and older, the CPS “yes” rate was higher than the NCS “yes” rate (The CPS rate for those age 65 and older was 10.6% with 90-percent confidence interval ranging from 9.9% to 11.3%, whereas the NCS rate was 8.6%). The comparisons of the “yes” rates between the CPS and the NCS for the various gender and racial groups are mixed.

Table 4. Question #2 Rates and CPS Nonresponse Rates for Question #2 (population age 18+).

This table presents “yes” response rates for Question 2 by demographic groups for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate to Question 2 is presented.

The CPS “yes” rate is slightly lower for all age groups other than those age 50 to 64 and those age 65 and older. For those age 50 to 64, the CPS “yes” rate to the inquiry about having a vision problem was almost half of the NCS rate. In contrast, for those age 65 and older, the two rates were almost identical. In both surveys, reports of difficulty seeing increased with age. Comparisons involving the other demographic groupings showed lower rates for the CPS than for the NCS although for men, women White Non-Hispanic, and Black Non-Hispanics the differences were very slight. Hispanics and those in the Other race Non-Hispanic category had somewhat larger differences between the CPS and the NCS. Again, care is required in making comparisons between CPS and NCS, since we have not included a standard error (or associated confidence interval) for the NCS estimates.

Table 5. Question #3 Rates and CPS Nonresponse Rates for Question #3 (population age 18+).

This table presents “yes” response rates for Question 3 by demographics for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate to this question is presented.

The CPS “yes” rate is lower for all demographic groups except those in the “Other Non Hispanic” group. Those in the “Other Non Hispanic” group had a higher “yes” rate in the CPS than in the NCS, but the confidence interval around the CPS estimate did include the NCS estimate.

Table 6. Question #4 Rates and CPS Nonresponse Rates for Question #4 (population age 18+).

This table presents “yes” response rates for Question 4 by demographics for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that

month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate in February to the question is presented.

The CPS “yes” rate is lower than the NCS rate for all demographic groups. For almost every demographic group, the NCS “yes” rate to the inquiry of whether someone has any other physical disability is at least twice as large as the CPS “yes” rate.

Table 7. Question #5 Rates and CPS Nonresponse Rates for Question #5 (population age 18+).

This table presents “yes” response rates for Question 5 by demographics for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate to this question in February is presented.

The CPS “yes” rate is lower than the NCS rate for all demographic groups. The difference for those 65 and older and for Black, Non-Hispanics, however, is slight.

Table 8. Question #6 Rates and CPS Nonresponse Rates for Question #6 (population age 18+).

This table presents “yes” response rates for Question 6 by demographics for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate in February for Question 6 is presented.

The CPS “yes” rate is lower for all demographic groups. In general, the differences between the NCS “yes” rates to question 6 and the CPS “yes” rates were quite large. Typically, the NCS rate was three times larger than the CPS rate. The incidence of someone being identified as having a physical, mental or emotional condition lasting 3 months or longer did not vary much across the demographic groups within each of the surveys (unlike some of the other conditions).

Table 9. Question #7 Rates and CPS Nonresponse Rates for Question #7 (population age 18+).

This table presents “yes” response rates for Question 7 by demographics for both the CPS and the NCS, as well as labor force status and Month in Sample status for the CPS (recall that month-in-sample 4 and 8 were not included in the disability test). In addition, the CPS nonresponse rate to this question in February is presented.

The CPS “yes” rate is lower for all demographic groups. The CPS did display the same pattern across age groups as was exhibited in the NCS: an increasing incidence with age of having a condition that limited an individual’s full participation in daily activities. Care is required in making these comparisons between CPS and NCS, since we have not included a standard error (or associated confidence interval) for the NCS estimates.

Labor Force Classification Results (Tables 10 to 13)

Tables 10 through 13 present unemployment rates, employment-to-population ratios, and labor force participation rates for those who were classified as disabled, not disabled and those for whom disability status was missing. In addition to overall estimates, rates and ratios were also estimated for specific demographic groups and by month in sample status. Individuals' labor force statuses were generated using standard CPS procedures. For each of the labor force rates and ratios, 90% confidence intervals were computed using the method of generalized replication which is briefly discussed in more detail in the next section. We only present labor force classifications for the CPS sample, since the labor force classification measure of NCS was not directly comparable to that in the CPS.

Table 10. Unemployment Rates by Disability Status from CPS (population age 18+)

This table presents unemployment rate by disabled, not disabled, and missing disability status by demographic groups and month in sample status for the CPS. In all cases, the unemployment rates for the disabled population are higher than for the non disabled, while the unemployment rates for those whose disability status was missing are generally lower than for the non disabled population. For example, among those who were 18 years of age or older, the unemployment rate for those who had a disability was 10.5% compared to 4.7% for those who were did not have a disability and 3.0% for those whose disability status was missing.

Table 11. Employment to Population Ratios by Disability from CPS (population age 18+).

This table presents employment-population ratios by disabled, not disabled, and missing status by demographic groups and month-in-sample status for the CPS. In all cases, the employment-population ratios for disabled population are much lower than the ratios for the non disabled, while those whose disability status was missing generally had lower ratios than the non disabled population in similar demographic groups. However, the ratios for those with a missing disability status were still much larger than for the disabled population. The ratios for those with missing status were closer to the ratios for those were not disabled than they were to the ratios for the disabled. For example, among those who were 18 years of age or older, the employment-population ratio for those who were disabled was only 21.4% compared to 69.0% for those who were not disabled and 55.9% for those whose disability status was missing. The greater similarity between the employment-population ratios for the non disabled and for those with missing disability status tentatively suggests that those whose disability status is missing are more likely to be non-disabled than they are disabled.

Table 12. Labor Force Participation Rates by Disability Status from CPS (population age 18+).

This table presents labor force participation rates by disabled, not disabled, and missing status by demographic groups and month-in-sample status for the CPS. In all cases, the rates for the disabled population are much lower than the non disabled, while those whose classification status was missing are generally lower than the non disabled population but still much larger than the disabled population. For example, only 23.9% of those 18 or older who were disabled

participated in the labor market compared to 72.4% of those 18 or older who were not disabled and 57.6% of those for whom disability status was missing.

Table 13. Labor Force Estimates from the CPS by Disability and Question (population age 18+).

This table presents labor force estimates as well as percent distribution estimates for disability classification as well as response classification for each of the seven individual questions. There are eight rows to the table, one for disability status and one for each of the seven questions. Each of the eight rows is divided into three groups. The row marked with a “?” indicates a missing classification status while “Yes” indicates disabled, and “No” indicates not disabled. The rows corresponding to the individual questions are similarly organized. The “% Distribution” column of the table indicates the classification rate for overall disability or response to each of the individual questions. Note that these rates are slightly different than those presented in Tables 2 thru Table 9 since “missing” is now included in the percent distribution in this table, whereas it was excluded in the previous tables.

Those who answered “yes” to each of the questions displayed a similar pattern with regard to labor force estimates as was presented in Tables 10 through 12 for those classified disabled. Individuals who had a “yes” response to the specified question uniformly had a higher unemployment rate and a lower employment-population ratio than did those who answered “no” to the question.

Alternative Disability Classification Algorithm (Table 14)

Table 14. Comparison of Alternative Disability Algorithm (population age 18+).

This table presents a comparison of our disability algorithm (labeled “original” in the table) with an alternative algorithm which would classify someone as disabled if they answered “yes” to *any* question, by demographic groups. Note that the CPS rates remain smaller than those from NCS even under the alternative algorithm. Also note that the alternative algorithm yields much higher disability rates than the “original” algorithm.

Effect on Response Rate in the Following Month (Tables 15 and 16)

Table 15. Comparison of Interview Completion Rates in March for Those Who Received Disability Questions and Those Who Did Not (in percent form).

This table presents interview completion rates in March for those who received and did not receive the disability questions in February, by demographic groups. The completion rates do not seem to be affected by the presence of the disability questions. From these estimates, we tentatively concluded that the inclusion of these disability questions in the CPS would not adversely affect the willingness of respondents to participate in subsequent CPS interviews.

Table 16. Comparison of Interview Completion rates by Type of Non-Interview.

This table presents more details on interview completion rates in March by type of non-interview, by demographic groups, for those who did or did not receive the disability question in February. As we saw in Table 15, the rates do not seem to be affected by the presence of the disability questions.

4. Technical Details on the Construction of the CPS Estimates, and Comparisons to NCS Estimates.

In this section, we discuss a few technical details related to our analyses.

Weighting and Estimation for the CPS Disability Analysis

Second-stage weights for February were used in our analysis of the CPS disability data. For more details on second-stage weights, see Technical Paper 63RV: Current Population Survey – Design and Methodology, available online at <http://www.bls.gov/cps/home.htm>. No special non-response adjustment (for disability) was done other than that which is done for the basic CPS.

Variance Estimation for the CPS Disability Analysis

Second-stage replicates (160 replicates) were used for variance estimation.

Comparisons between the CPS and the NCS

At the time of our analyses, we did not have stratum or SECU (Standard Error Computing Unit) information for the NCS. This information would have allowed us to construct estimates of variances for the NCS estimates which would have correctly reflected the complex nature of the NCS sample design. It is very likely that the NCS estimates presented in our analysis have much larger variances than the associated CPS estimates, because the CPS has a much larger sample size. While it is tempting to use the 90% confidence interval we present for the CPS estimates and see if the NCS falls within that interval, doing so will not yield a valid 10% hypothesis test (say) of whether the CPS and NCS estimates are significantly different. A truly valid comparison of such differences would require an estimate of the variance of the NCS estimate as well as the CPS estimates. We hope to do further analyses in the future which would more accurately present such tests.

5. Figures and Tables.

Figure 1.
"Yes" Response Rate by Question and Disability
(Missing Excluded)

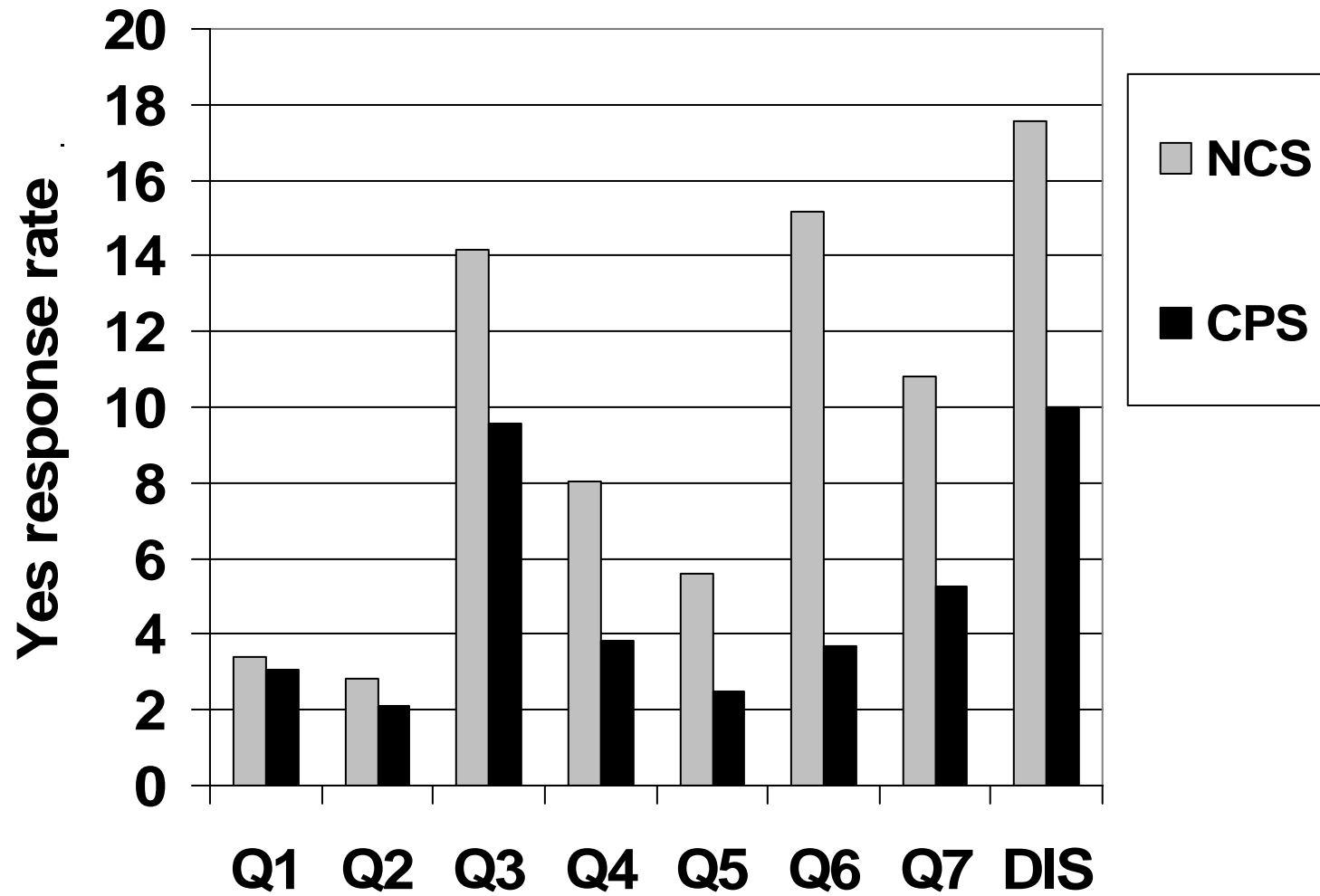


Figure 2.
 “Yes” Response Rate by Question and Disability
 with CPS Self and Proxy (Missing Excluded)

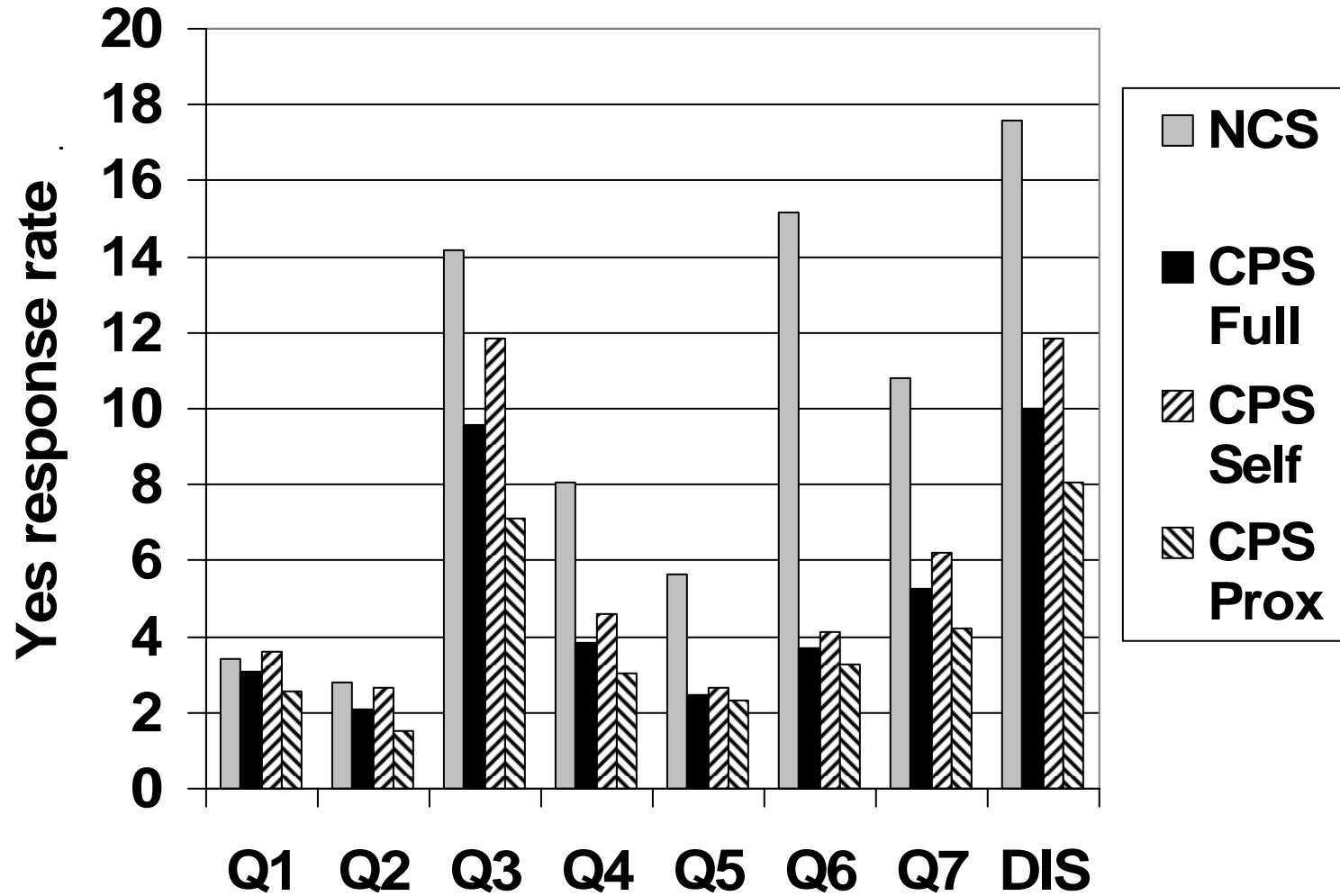


Table 1. Sample Distributions by Demographics (population age 18+)

	Samples			
	CPS test sample: Did get Question	CPS test sample: Did not get Question	Full CPS	NCS
Age				
18+	100.00	100.00	100.00	100.00
18-34	30.28	30.85	30.56	29.57
35-49	29.71	30.03	29.87	31.79
50-64	23.60	23.15	23.37	21.55
65+	16.42	15.98	16.20	17.09
Gender				
Men	48.08	48.36	48.21	45.99
Women	51.92	51.64	51.79	54.01
Race/Ethnicity				
Hispanic	12.80	13.04	12.90	10.25
White Non Hispanic	69.68	69.66	69.70	72.72
Black Non Hispanic	11.01	11.48	11.22	13.14
Other Non Hispanic	6.52	5.82	6.19	3.88
Labor Force				
Employed	63.70	64.12	63.85	-
Unemployed	3.24	3.42	3.36	-
CLF	66.94	67.54	67.21	-
NILF	33.06	32.47	32.79	-

Table 2. Disability Rates and CPS Nonresponse Rates for Disability (population age 18+)
Yes to Question #1 or Question #2, or Yes to any two of Questions #3 – Question #7

	Disability Rates (in percent form)				Disability Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	10.00	9.67, 10.33	17.58	-7.58	6.43	6.04, 6.81
18-34	3.92	3.57, 4.27	9.45	-5.53	6.21	5.65, 6.77
35-49	6.24	5.79, 6.70	14.98	-8.74	6.44	5.89, 7.00
50-64	11.72	11.02, 12.42	22.90	-11.18	6.42	5.77, 7.07
65+	25.65	24.64, 26.65	29.78	-4.13	6.90	6.02, 7.58
Gender						
Men	9.86	9.44, 10.27	14.75	-4.89	6.45	6.01, 6.89
Women	10.14	9.70, 10.57	20.00	-9.86	6.40	5.99, 6.82
Race/Ethnicity						
Hispanic	6.87	6.13, 7.62	15.77	-8.90	7.09	5.97, 8.21
White Non Hispanic	10.52	10.12, 10.92	18.62	-8.10	6.02	5.59, 6.45
Black Non Hispanic	11.37	10.16, 12.57	14.43	-3.06	8.81	7.38, 10.24
Other Non Hispanic	8.28	7.11, 9.44	13.68	-5.40	5.44	4.14, 6.75
Labor Force						
Employed	3.34	3.13, 3.54	-	-	5.64	5.21, 6.06
Unemployed	7.52	6.33, 8.72	-	-	3.41	2.32, 4.50
CLF	3.54	3.35, 3.74	-	-	5.53	5.11, 5.95
NILF	23.46	22.64, 24.29	-	-	8.24	7.62, 8.86
Month in Sample						
MIS 1	10.40	9.60, 11.19	-	-	4.10	3.43, 4.78
MIS 2	10.50	9.55, 11.46	-	-	4.91	4.19, 5.63
MIS 3	9.30	8.52, 10.09	-	-	7.04	6.04, 8.04
MIS 5	10.21	9.30, 11.11	-	-	6.76	5.68, 7.84
MIS 6	9.34	8.46, 10.22	-	-	6.30	5.45, 7.15
MIS 7	10.28	9.39, 11.16	-	-	9.54	8.28, 10.81

Table 3. Question #1 Rates and CPS Nonresponse Rates for Question #1 (population age 18+)
(Do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have a hearing problem that prevents (you/HH member's name/them) from hearing what is said in normal conversation even with a hearing aid?

	Question #1 Rates (in percent form)				Question #1 Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	3.08	2.91, 3.25	3.43	-0.35	5.69	5.31, 6.06
18-34	0.74	0.58, 0.91	1.00	-0.26	5.44	4.91, 5.98
35-49	1.37	1.17, 1.57	2.25	-0.88	5.86	5.35, 6.37
50-64	3.00	2.68, 3.32	4.43	-1.43	5.68	5.04, 6.32
65+	10.60	9.87, 11.34	8.59	+2.01	5.83	5.13, 6.52
Gender						
Men	3.73	3.47, 3.99	3.98	-0.25	5.76	5.32, 6.20
Women	2.47	2.26, 2.69	2.96	-0.49	5.62	5.22, 6.02
Race/Ethnicity						
Hispanic	1.52	1.15, 1.90	2.64	-1.12	6.28	5.27, 7.29
White Non Hispanic	3.60	3.39, 3.82	3.92	-0.32	5.37	4.95, 5.78
Black Non Hispanic	1.93	1.43, 2.43	1.28	+0.65	7.60	6.25, 8.95
Other Non Hispanic	2.37	1.79, 2.94	3.67	-1.30	4.72	3.49, 5.95
Labor Force						
Employed	1.41	1.28, 1.55	-	-	5.06	4.65, 5.48
Unemployed	1.87	1.21, 2.53	-	-	2.98	1.92, 4.05
CLF	1.44	1.30, 1.57	-	-	4.96	4.56, 5.37
NILF	6.48	6.04, 6.92	-	-	7.15	6.57, 7.73
Month in Sample						
MIS 1	3.45	2.97, 3.93	-	-	3.66	2.99, 4.33
MIS 2	3.07	2.64, 3.50	-	-	4.06	3.46, 4.66
MIS 3	2.74	2.38, 3.10	-	-	6.13	5.14, 7.11
MIS 5	3.42	2.94, 3.90	-	-	6.26	5.26, 7.25
MIS 6	2.72	2.33, 3.11	-	-	5.73	4.92, 6.54
MIS 7	3.06	2.63, 3.50	-	-	8.36	7.13, 9.59

Table 4. Question #2 Rates and CPS Nonresponse Rates for Question #2 (population age 18+)
(Do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have a vision problem that prevents (you/HH member's name/them) from reading a newspaper even when wearing glasses or contacts?)

	Question #2 Rates (in percent form)				Question #2 Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	2.10	1.93, 2.27	2.81	-0.71	5.85	5.48, 6.23
18-34	0.65	0.49, 0.81	0.81	-0.16	5.61	5.08, 6.15
35-49	0.97	0.78, 1.15	1.90	-0.93	6.00	5.47, 6.52
50-64	2.30	1.94, 2.67	4.16	-1.85	5.70	5.08, 6.32
65+	6.57	5.92, 7.21	6.28	+0.29	6.26	5.54, 6.98
Gender						
Men	1.96	1.75, 2.16	2.72	-0.76	5.90	5.46, 6.34
Women	2.24	2.00, 2.47	2.89	-0.65	5.81	5.41, 6.20
Race/Ethnicity						
Hispanic	2.06	1.58, 2.53	3.89	-1.83	6.52	5.44, 7.59
White Non Hispanic	2.05	1.86, 2.23	2.37	-0.32	5.51	5.10, 5.92
Black Non Hispanic	2.91	2.36, 3.46	4.20	-1.29	7.99	6.61, 9.37
Other Non Hispanic	1.44	1.02, 1.87	3.46	-2.02	4.61	3.39, 5.82
Labor Force						
Employed	0.65	0.54, 0.75	-	-	5.15	4.74, 5.56
Unemployed	1.89	1.11, 2.67	-	-	3.00	1.93, 4.07
CLF	0.71	0.60, 0.81	-	-	5.05	4.64, 5.45
NILF	5.00	4.57, 5.44	-	-	7.49	6.89, 8.08
Month in Sample						
MIS 1	2.13	1.76, 2.49	-	-	3.82	3.16, 4.49
MIS 2	2.25	1.87, 2.64	-	-	4.40	3.72, 5.08
MIS 3	2.16	1.73, 2.58	-	-	6.21	5.22, 7.19
MIS 5	2.24	1.84, 2.64	-	-	6.30	5.30, 7.29
MIS 6	1.97	1.54, 2.41	-	-	5.83	5.00, 6.67
MIS 7	1.85	1.44, 2.25	-	-	8.65	7.41, 9.88

Table 5. Question #3 Rates and CPS Nonresponse Rates for Question #3 (population age 18+)
(Do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have any condition that substantially limits one or more basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying?)

	Question #3 Rates (in percent form)				Question #3 Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	9.55	9.23, 9.87	14.17	-4.62	6.16	5.78, 6.55
18-34	2.11	1.81, 2.41	3.43	-1.32	5.79	5.25, 6.33
35-49	5.56	5.10, 6.01	10.72	-5.16	6.17	5.62, 6.71
50-64	12.58	11.85, 13.31	17.19	-4.61	6.09	5.45, 6.72
65+	26.36	25.26, 27.47	35.31	-8.95	6.95	6.17, 7.73
Gender						
Men	8.43	8.04, 8.83	10.61	-2.18	6.11	5.66, 6.56
Women	10.60	10.16, 11.03	17.20	-6.60	6.21	5.80, 6.61
Race/Ethnicity						
Hispanic	6.32	5.55, 7.08	12.67	-6.35	6.79	5.69, 7.90
White Non Hispanic	10.03	9.67, 10.39	15.17	-5.14	5.76	5.34, 6.18
Black Non Hispanic	12.14	10.88, 13.39	12.45	-0.31	8.58	7.19, 9.98
Other Non Hispanic	6.52	5.62, 7.43	5.25	+1.27	5.11	3.83, 6.39
Labor Force						
Employed	2.66	2.47, 2.85	-	-	5.33	4.92, 5.75
Unemployed	5.55	4.36, 6.74	-	-	3.21	2.15, 4.27
CLF	2.80	2.62, 2.98	-	-	5.23	4.82, 5.64
NILF	23.65	22.81, 24.49	-	-	8.05	7.42, 8.67
Month in Sample						
MIS 1	10.11	9.37, 10.84	-	-	4.17	3.49, 4.85
MIS 2	9.88	8.96, 10.80	-	-	4.64	3.95, 5.33
MIS 3	9.19	8.47, 9.91	-	-	6.56	5.56, 7.55
MIS 5	9.90	9.08, 10.73	-	-	6.44	5.44, 7.45
MIS 6	8.98	8.19, 9.76	-	-	6.13	5.31, 6.94
MIS 7	9.24	8.46, 10.02	-	-	9.13	7.84, 10.42

Table 6. Question #4 Rates and CPS Nonresponse Rates for Question #4 (population age 18+)
(Do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have any other physical disability?

	Question #4 Rates (in percent form)				Question #4 Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	3.85	3.64, 4.06	8.04	-4.19	6.10	5.72, 6.47
18-34	1.38	1.13, 1.62	2.96	-1.58	5.91	5.37, 6.45
35-49	2.44	2.15, 2.72	6.73	-4.29	6.18	5.64, 6.71
50-64	5.24	4.81, 5.67	13.79	-8.55	6.05	5.41, 6.68
65+	8.99	8.27, 9.70	12.01	-3.02	6.35	5.64, 7.07
Gender						
Men	3.74	3.46, 4.02	6.62	-2.88	6.10	5.66, 6.54
Women	3.95	3.67, 4.24	9.25	-5.30	6.09	5.70, 6.49
Race/Ethnicity						
Hispanic	2.83	2.33, 3.33	5.19	-2.36	6.79	5.64, 7.93
White Non Hispanic	3.86	3.63, 4.09	8.61	-4.75	5.67	5.26, 6.09
Black Non Hispanic	5.55	4.64, 6.46	7.12	-1.57	8.50	7.09, 9.92
Other Non Hispanic	2.89	2.09, 3.70	7.91	-5.02	5.20	3.91, 6.49
Labor Force						
Employed	1.23	1.10, 1.37	-	-	5.38	4.97, 5.79
Unemployed	2.43	1.55, 3.30	-	-	3.52	2.42, 4.62
CLF	1.29	1.16, 1.43	-	-	5.29	4.88, 5.70
NILF	9.16	8.58, 9.74	-	-	7.73	7.15, 8.31
Month in Sample						
MIS 1	3.99	3.54, 4.44	-	-	3.87	3.17, 4.57
MIS 2	4.14	3.52, 4.76	-	-	4.72	4.04, 5.40
MIS 3	3.49	2.96, 4.01	-	-	6.60	5.62, 7.58
MIS 5	3.89	3.34, 4.43	-	-	6.30	5.29, 7.30
MIS 6	3.69	3.16, 4.23	-	-	6.11	5.29, 6.93
MIS 7	3.90	3.38, 4.43	-	-	9.08	7.82, 10.34

Table 7. Question #5 Rates and CPS Nonresponse Rates for Question #5 (population age 18+)
(Do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have any emotional or mental disability?)

	Question #5 Rates (in percent form)				Question #5 Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	2.48	2.29, 2.67	5.62	-3.14	6.24	5.87, 6.62
18-34	2.18	1.93, 2.42	4.85	-2.67	6.09	5.54, 6.64
35-49	2.54	2.23, 2.85	6.30	-3.76	6.34	5.79, 6.89
50-64	3.13	2.73, 3.53	8.35	-5.22	6.17	5.53, 6.80
65+	2.00	1.67, 2.33	2.31	-0.31	6.47	5.74, 7.19
Gender						
Men	2.38	2.13, 2.64	4.00	-1.62	6.25	5.81, 6.70
Women	2.57	2.34, 2.81	7.01	-4.44	6.24	5.85, 6.62
Race/Ethnicity						
Hispanic	1.27	0.97, 1.57	4.50	-3.23	6.78	5.67, 7.89
White Non Hispanic	2.62	2.40, 2.85	6.18	-3.56	5.86	5.44, 6.28
Black Non Hispanic	3.03	2.41, 3.65	3.73	-0.70	8.47	7.07, 9.87
Other Non Hispanic	2.40	1.74, 3.05	4.62	-2.22	5.55	4.23, 6.88
Labor Force						
Employed	0.90	0.78, 1.03	-	-	5.53	5.11, 5.95
Unemployed	3.81	2.84, 4.79	-	-	3.41	2.31, 4.50
CLF	1.05	0.92, 1.18	-	-	5.42	5.01, 5.84
NILF	5.46	5.01, 5.92	-	-	7.90	7.33, 8.47
Month in Sample						
MIS 1	2.68	2.25, 3.11	-	-	3.86	3.19, 4.53
MIS 2	2.60	2.20, 3.00	-	-	4.81	4.14, 5.49
MIS 3	2.25	1.86, 2.64	-	-	6.92	5.94, 7.91
MIS 5	2.49	2.08, 2.89	-	-	6.51	5.45, 7.57
MIS 6	2.49	2.05, 2.93	-	-	6.11	5.28, 6.94
MIS 7	2.35	1.88, 2.83	-	-	9.34	8.08, 10.61

Table 8. Question #6 Rates and CPS Nonresponse Rates for Question #6 (population age 18+)
Because of a physical, mental or emotional condition lasting 3 months or longer, (do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have any difficulty learning, remembering or concentrating?

	Question #6 Rates (in percent form)				Question #6 Nonresponse Rate	
	Difference (CPS – NCS)		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	3.68	3.48, 3.89	15.18	-11.50	6.30	5.93, 6.68
18-34	2.77	2.45, 3.09	14.34	-11.57	6.16	5.60, 6.72
35-49	2.57	2.28, 2.85	14.13	-11.56	6.34	5.79, 6.89
50-64	3.74	3.36, 4.12	16.17	-12.43	6.24	5.60, 6.87
65+	7.33	6.70, 7.95	17.34	-10.01	6.60	5.85, 7.36
Gender						
Men	3.69	3.41, 3.96	12.82	-9.13	6.39	5.95, 6.83
Women	3.68	3.41, 3.95	17.19	-13.51	6.23	5.83, 6.62
Race/Ethnicity						
Hispanic	2.27	1.82, 2.73	17.40	-15.13	6.89	5.79, 7.99
White Non Hispanic	3.75	3.52, 3.99	15.12	-11.37	5.96	5.53, 6.38
Black Non Hispanic	4.82	4.02, 5.62	14.23	-9.41	8.37	6.96, 9.79
Other Non Hispanic	3.80	2.88, 4.71	13.66	-9.86	5.39	4.09, 6.70
Labor Force						
Employed	1.15	1.02, 1.28	-	-	5.60	5.17, 6.02
Unemployed	4.39	3.27, 5.50	-	-	3.51	2.42, 4.60
CLF	1.31	1.18, 1.44	-	-	5.49	5.08, 5.91
NILF	8.62	8.09, 9.15	-	-	7.94	7.35, 8.54
Month in Sample						
MIS 1	3.77	3.29, 4.24	-	-	3.93	3.26, 4.59
MIS 2	4.19	3.64, 4.74	-	-	4.93	4.22, 5.63
MIS 3	3.52	3.06, 3.99	-	-	7.02	6.00, 8.04
MIS 5	3.84	3.33, 4.34	-	-	6.61	5.55, 7.67
MIS 6	3.07	2.61, 3.52	-	-	6.11	5.25, 6.96
MIS 7	3.72	3.16, 4.28	-	-	9.34	8.11, 10.57

Table 9. Question #7 Rates and CPS Nonresponse Rates for Question #7 (population age 18+)
Because of a physical, mental or emotional condition lasting 3 months or longer, (Do you/Does HH member's name/Does anyone in this household who is 15 years old or over) have difficulty participating fully in school, housework, or other daily activities?

	Question #7 Rates (in percent form)				Question #7 Nonresponse Rate	
	CPS		NCS	Difference (CPS – NCS)	CPS	
	Rate	90% Confidence Interval	Rate	Rate	Rate	90% Confidence Interval
Age						
18+	5.28	5.03, 5.53	10.81	-5.53	6.37	5.99, 6.75
18-34	2.37	2.08, 2.65	7.59	-5.22	6.28	5.71, 6.85
35-49	3.58	3.20, 3.96	10.83	-7.25	6.43	5.87, 6.99
50-64	6.56	6.03, 7.08	13.56	-7.00	6.18	5.56, 6.81
65+	11.93	11.15, 12.70	12.85	-0.92	6.68	5.94, 7.42
Gender						
Men	4.61	4.32, 4.91	7.49	-2.88	6.45	6.01, 6.89
Women	5.90	5.54, 6.26	13.63	-7.73	6.29	5.89, 6.69
Race/Ethnicity						
Hispanic	3.56	2.98, 4.15	9.79	-6.23	6.94	5.81, 8.08
White Non Hispanic	5.41	5.12, 5.71	11.59	-6.18	5.96	5.55, 6.38
Black Non Hispanic	6.86	5.95, 7.76	8.68	-1.82	8.61	7.18, 10.04
Other Non Hispanic	4.63	3.72, 5.54	5.99	-1.36	5.77	4.43, 7.11
Labor Force						
Employed	1.10	0.96, 1.23			5.63	5.21, 6.05
Unemployed	3.62	2.63, 4.61	-	-	3.41	2.32, 4.50
CLF	1.22	1.09, 1.35	-	-	5.52	5.10, 5.94
NILF	13.74	13.06, 14.41	-	-	8.08	7.48, 8.69
Month in Sample						
MIS 1	5.12	4.60, 5.64			3.99	3.31, 4.68
MIS 2	5.81	5.13, 6.49	-	-	4.92	4.21, 5.64
MIS 3	5.11	4.48, 5.74	-	-	7.00	6.01, 7.99
MIS 5	5.04	4.43, 5.65	-	-	6.76	5.67, 7.85
MIS 6	5.27	4.59, 5.94	-	-	6.27	5.41, 7.14
MIS 7	5.35	4.65, 6.05	-	-	9.35	8.12, 10.58

Table 10. Unemployment Rates by Disability Status from CPS (population age 18+)

	Disability Status					
	Disabled		Not Disabled		Missing	
	Rate	90% Confidence Interval	Rate	90% Confidence Interval	Rate	90% Confidence Interval
Age						
18+	10.50	8.79, 12.20	4.74	4.42, 5.05	2.98	2.10, 3.87
18-34	16.03	11.04, 21.01	7.20	6.61, 7.80	5.05	2.80, 7.30
35-49	9.32	6.13, 12.51	3.60	3.23, 3.96	2.44	1.08, 3.79
50-64	8.92	6.12, 11.72	3.21	2.76, 3.66	1.75	0.49, 3.01
65+	7.50	2.23, 12.78	2.30	1.32, 3.28	0.00	0.00, 0.00
Gender						
Men	12.16	9.68, 14.64	5.04	4.62, 5.47	3.60	2.32, 4.89
Women	8.27	5.60, 10.94	4.39	3.98, 4.80	2.21	1.09, 3.33
Race/Ethnicity						
Hispanic	8.48	3.14, 13.82	6.68	5.74, 7.61	4.07	0.66, 7.48
White Non Hispanic	8.46	6.70, 10.23	3.76	3.45, 4.06	1.66	0.72, 2.60
Black Non Hispanic	23.21	12.01, 34.41	8.65	7.49, 9.82	8.17	4.16, 12.17
Other Non Hispanic	25.24	13.12, 37.35	4.88	3.80, 5.96	2.78	0.00, 6.36
Month in Sample						
MIS 1	10.90	6.84, 14.95	4.46	3.78, 5.14	6.46	2.64, 10.28
MIS 2	12.15	7.41, 16.89	4.86	4.17, 5.56	1.83	0.25, 3.41
MIS 3	10.24	5.31, 15.16	4.87	4.20, 5.54	2.49	0.79, 4.20
MIS 5	8.99	4.02, 13.95	5.20	4.37, 6.02	4.27	0.85, 7.69
MIS 6	14.13	8.52, 19.74	4.64	3.98, 5.30	3.63	1.04, 6.21
MIS 7	6.50	2.41, 10.58	4.38	3.72, 5.04	0.93	0.00, 1.96

Table 11. Employment to Population Ratios by Disability Status from CPS (population age 18+)

	Disability Status					
	Disabled		Not Disabled		Missing	
	Rate	90% Confidence Interval	Rate	90% Confidence Interval	Rate	90% Confidence Interval
Age						
18+	21.43	20.29, 22.57	69.00	68.45, 69.54	55.87	53.65, 58.09
18-34	38.12	33.64, 42.60	73.34	72.44, 74.25	60.08	56.56, 63.61
35-49	35.37	32.09, 38.65	84.15	83.45, 84.85	71.67	68.61, 74.72
50-64	29.10	26.35, 31.85	73.43	72.44, 74.42	59.25	54.70, 63.80
65+	5.47	4.38, 6.57	16.26	15.21, 17.31	17.13	13.23, 21.04
Gender						
Men	25.43	23.61, 27.24	76.63	76.00, 77.26	63.84	60.90, 66.77
Women	17.83	16.27, 19.39	61.91	61.13, 62.69	48.44	45.66, 51.22
Race/Ethnicity						
Hispanic	29.41	24.28, 34.54	68.90	67.39, 70.41	55.22	49.60, 60.83
White Non Hispanic	22.39	21.03, 23.74	69.59	68.99, 70.20	57.45	54.84, 60.06
Black Non Hispanic	11.95	9.06, 14.84	66.06	64.12, 68.00	49.52	43.18, 55.86
Other Non Hispanic	16.92	11.65, 22.20	67.62	65.91, 69.33	56.24	47.03, 65.46
Month in Sample						
MIS 1	24.60	21.47, 27.74	69.93	68.58, 71.28	55.01	48.91, 61.12
MIS 2	20.43	17.75, 23.10	69.28	68.02, 70.55	54.99	48.97, 61.01
MIS 3	20.77	17.19, 24.36	70.36	69.04, 71.69	61.00	55.31, 66.70
MIS 5	19.37	16.53, 22.21	68.33	66.94, 69.73	55.60	49.98, 61.22
MIS 6	20.15	17.18, 23.13	67.16	65.91, 68.41	53.33	48.36, 58.30
MIS 7	23.07	19.39, 26.76	68.89	67.59, 70.19	54.69	50.14, 59.23

Table 12. Labor Force Participation Rates by Disability Status from CPS (population age 18+)

	Disability Status					
	Disabled		Not Disabled		Missing	
	Rate	90% Confidence Interval	Rate	90% Confidence Interval	Rate	90% Confidence Interval
Age						
18+	23.94	22.76, 25.13	72.43	71.92, 72.94	57.59	55.36, 59.82
18-34	45.39	40.44, 50.35	79.04	78.19, 79.88	63.28	59.76, 66.80
35-49	39.01	35.80, 42.21	87.29	86.63, 87.96	73.46	70.55, 76.37
50-64	31.95	29.22, 34.68	75.87	74.93, 76.80	60.31	55.83, 64.79
65+	5.92	4.80, 7.03	16.65	15.61, 17.68	17.13	13.23, 21.04
Gender						
Men	28.95	27.04, 30.85	80.70	80.14, 81.26	66.22	63.31, 69.14
Women	19.44	17.80, 21.08	64.75	64.01, 65.49	49.53	46.72, 52.34
Race/Ethnicity						
Hispanic	32.13	26.80, 37.46	73.83	72.49, 75.17	57.56	51.76, 63.36
White Non Hispanic	24.46	23.07, 25.84	72.31	71.73, 72.89	58.42	55.90, 60.94
Black Non Hispanic	15.56	12.39, 18.73	72.32	70.35, 74.28	53.93	47.53, 60.33
Other Non Hispanic	22.64	16.82, 28.45	71.09	69.34, 72.85	57.85	48.18, 67.53
Month in Sample						
MIS 1	27.61	24.32, 30.91	73.20	71.89, 74.50	58.81	52.92, 64.70
MIS 2	23.25	20.50, 26.00	72.83	71.59, 74.07	56.02	49.91, 62.12
MIS 3	23.14	19.40, 26.88	73.97	72.71, 75.22	62.56	56.89, 68.24
MIS 5	21.29	18.39, 24.18	72.08	70.79, 73.36	58.08	52.63, 63.53
MIS 6	23.47	20.18, 26.76	70.43	69.22, 71.64	55.34	50.29, 60.38
MIS 7	24.67	20.81, 28.54	72.04	70.74, 73.35	55.20	50.62, 59.78

Table 13. Labor Force Estimates from the CPS by Disability and Question (population age 18+).

Disability and Question Classification		Labor Force Estimates from the CPS							
		% Distribution		Unemployment Rate		Employment to Population Ratio		Labor Force Participation Rate	
		NCS	CPS	Estimate	s.e	Estimate	s.e	Estimate	s.e
Disabled	Yes	17.58	9.36	10.50	1.04	21.43	0.69	23.94	0.72
	No	82.38	84.22	4.74	0.19	69.00	0.33	72.43	0.31
	?	0.04	6.43	2.98	0.54	55.87	1.35	57.59	1.35
Question #1	Yes	3.43	2.90	6.43	1.33	29.43	1.44	31.45	1.50
	No	96.55	91.41	4.91	0.19	65.22	0.32	68.59	0.31
	?	0.02	5.69	2.91	0.60	56.73	1.40	58.42	1.40
Question #2	Yes	2.81	1.98	13.23	3.04	19.70	1.63	22.71	1.74
	No	97.17	92.17	4.88	0.19	65.13	0.33	68.47	0.31
	?	0.02	5.85	2.87	0.59	56.05	1.41	57.71	1.42
Question #3	Yes	14.14	8.97	9.79	1.24	17.87	0.68	19.81	0.71
	No	85.68	84.87	4.80	0.19	69.17	0.34	72.65	0.32
	?	0.18	6.16	2.97	0.57	55.13	1.41	56.82	1.40
Question #4	Yes	8.04	3.61	9.24	1.99	20.58	1.33	22.68	1.34
	No	91.96	90.29	4.87	0.19	65.93	0.32	69.31	0.31
	?	0.00	6.10	3.21	0.58	56.21	1.34	58.08	1.33
Question #5	Yes	5.61	2.33	18.01	2.65	23.34	1.65	28.46	1.74
	No	94.17	91.43	4.80	0.19	65.23	0.32	68.52	0.31
	?	0.22	6.24	3.04	0.56	56.38	1.32	58.15	1.33
Question #6	Yes	15.18	3.45	16.58	2.45	19.98	1.20	23.95	1.24
	No	84.80	90.24	4.78	0.19	65.87	0.33	69.18	0.31
	?	0.03	6.30	3.08	0.55	56.54	1.37	58.34	1.37
Question #7	Yes	10.81	4.95	14.67	2.35	13.31	0.88	15.60	0.93
	No	89.19	88.69	4.82	0.19	67.04	0.33	70.44	0.32
	?	0.00	6.37	2.99	0.54	56.29	1.33	58.03	1.34

Table 14. Comparison of Alternative Disability Algorithm (population age 18+).

	Original Disability Algorithm			Alternative Disability Algorithm (Any Question = Yes)		
	CPS		NCS	CPS		NCS
	Estimate	s.e.	Estimate	Estimate	s.e.	Estimate
Age						
18+	10.00	0.20	17.58	15.92	0.26	30.27
18-34	3.92	0.22	9.45	6.57	0.29	20.65
35-49	6.24	0.28	14.98	10.06	0.36	25.23
50-64	11.72	0.43	22.90	19.49	0.54	34.00
65+	25.65	0.61	29.78	38.71	0.71	51.59
Gender						
Men	9.86	0.25	14.75	15.32	0.31	25.26
Women	10.14	0.27	20.00	16.47	0.33	34.53
Race/Ethnicity						
Hispanic	6.87	0.45	15.77	11.17	0.57	31.53
White Non Hispanic	10.52	0.24	18.62	16.74	0.30	31.60
Black Non Hispanic	11.37	0.73	14.43	18.57	0.84	23.38
Other Non Hispanic	8.28	0.71	13.68	11.99	0.75	25.34

Table 15. Comparison of Interview Completion Rates in March for Those Who Received Disability Questions and Those Who Did Not (In percent form).

	Received Disability Questions	Did Not Receive Disability Questions
Age		
16+	95.25	95.34
16-17	95.03	95.23
18-34	92.56	93.19
35-49	95.49	95.35
50-64	96.39	96.51
65+	97.61	97.31
Gender		
Men	95.09	95.21
Women	95.39	95.46
Race/Ethnicity		
Hispanic	92.76	93.07
White Non Hispanic	95.89	96.03
Black Non Hispanic	93.69	93.27
Other Non Hispanic	94.27	94.21
Labor Force		
Employed	95.30	95.25
Unemployed	91.48	92.38
+NILF	95.52	95.82

Table 16. Comparisons of Interview Completion Rates by Type of Non-Interview

	Completed Interview		Partial Interview		Refused Interview/ No one home		Other Non-Interview (vacant or demolished)	
	Received	Did Not Receive	Received	Did Not Receive	Received	Did Not Receive	Received	Did Not Receive
Age								
16+	95.25	95.34	0.97	0.88	2.67	2.67	1.12	1.11
16-17	95.03	95.23	1.18	1.06	2.86	2.85	0.93	0.86
18-34	92.56	93.19	2.12	1.84	3.47	3.06	1.84	1.91
35-49	95.49	95.34	0.59	0.53	2.99	3.21	0.93	0.92
50-64	96.39	96.51	0.43	0.45	2.45	2.41	0.73	0.63
65+	97.61	97.31	0.48	0.44	1.06	1.39	0.86	0.86
Gender								
Men	95.09	95.21	1.08	1.03	2.68	2.61	1.16	1.15
Women	95.39	95.46	0.87	0.74	2.66	2.73	1.08	1.07
Race/Ethnicity								
Hispanic	92.76	93.07	1.51	1.81	3.85	3.62	1.87	1.50
White Non Hispanic	95.89	96.03	0.80	0.71	2.29	2.27	1.01	0.97
Black Non Hispanic	93.69	93.27	1.27	1.00	3.80	4.21	1.23	1.52
Other Non Hispanic	94.27	94.21	1.50	0.99	3.33	3.43	0.89	1.36
Labor Force								
Employed	95.30	95.25	0.81	0.74	2.90	3.03	0.98	0.99
Unemployed	91.48	92.38	2.66	2.41	3.36	2.41	2.50	2.79
NILF	95.52	95.82	1.09	0.98	2.17	2.03	1.22	1.16

Appendix A

CPS Disability Questions

Q1. Does anyone in this household who is 15 years old or over have a hearing problem that prevents them from hearing what is said in normal conversation even with a hearing aid?

If “yes” to Q1. → Who was that?

Q2. Does anyone in this household who is 15 years old or over have a vision problem that prevents them from reading a newspaper even when wearing glasses or contacts?

If “yes” to Q2. → Who was that?

Q3. Does anyone in this household who is 15 years old or over have any condition that substantially limits one or more basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying?

If “yes” to Q3. → Who was that?

Q4. Does anyone in this household who is 15 years old or over have any other physical disability?

If “yes” to Q4. → Who was that?

Q5. Does anyone in this household who is 15 years old or over have any emotional or mental disability?

If “yes” to Q5. → Who was that?

Q6. Because of a physical, mental or emotional condition lasting **3 months or longer**, does anyone in this household who is 15 years old or over have difficulty learning, remembering or concentrating?

If “yes” to Q6. → Who was that?

Q7. Because of a physical, mental or emotional condition lasting **3 months or longer**, does anyone in this household who is 15 years old or over have difficulty participating fully in school, housework, or other daily activities?

If “yes” to Q7. → Who was that?

The Algorithm for Disability Status

To be classified as disabled:

“Yes” to question 1 (a person has difficulty hearing)

OR

“Yes” to question 2 (a person has difficulty seeing)

OR

“Yes” to 2 or more of questions 3 through 7.

Appendix B

Labor Force Concepts

Civilian noninstitutional population Included are persons 16 years of age and older residing in the 50 states and the District of Columbia who are not inmates of institutions (for example, penal and mental facilities, homes for the aged), and who are not on active duty in the Armed Forces. Note that many of the studies contained in this paper are restricted to persons 18 years of age and older.

Employed persons All persons who, during the reference week, (a) did any work at all (at least 1 hour) as paid employees, worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family, and (b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, bad weather, childcare problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs.

Employment to population ratio This represents the proportion of the civilian noninstitutional population that is employed.

Labor force This group comprises all persons classified as employed or unemployed in accordance with the criteria described in this appendix.

Labor force participation rate This represents the proportion of the civilian noninstitutional population that is in the labor force.

Not in the labor force Included in this group are all persons in the civilian noninstitutional population who are neither employed nor unemployed. Information is collected on their desire for and availability to take a job at the time of the CPS interview, job search activity in the prior year, and reason for not looking in the 4-week period prior to the survey week. This group includes discouraged workers, defined as persons not in the labor force who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but who are not currently looking because they believe there are no jobs available or there are none for which they would qualify.

Unemployed persons All persons who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment sometime during the 4-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

Unemployment rate The unemployment rate represents the number of unemployed as a percent of the labor force.