The published version of this document can be found at
https://doi.org/10.1177/0145482X19887620

Employment and Unemployment Rates of People who are Blind or Visually Impaired: Estimates from Multiple Sources 1994 - 2017

Michele C. McDonnall, Ph.D., CRC

Zhen Sui, Ph.D.

The National Research and Training Center on Blindness & Low Vision

Mississippi State University

Author Note:

The contents of this manuscript were developed under a grant from the U.S. Department of Health and Human Services, NIDILRR grant 90RT5040-01-00. However, these contents do not necessarily represent the policy of the Department of Health and Human Services and should not indicate endorsement by the Federal Government.

Correspondence about this manuscript should be addressed to Michele McDonnall, The National Research and Training Center on Blindness & Low Vision, P.O. Box 6189, Mississippi State, MS 39762. Phone: 662-325-2001 Fax: 662-325-8989 Email: m.mcdonnall@msstate.edu

Abstract

Introduction: We examined four sources of data to evaluate the employment status of people with visual impairments, including their current status and a comparison with previous years.

Methods: Data from the American Community Survey (ACS) and three other nationally representative surveys were utilized to determine employment and unemployment rates for people with visual impairments, and to determine whether employment rates have changed over time. Data from the ACS was used to compare this population's employment and unemployment rates to people without disabilities and to people with other types of disabilities.

Results: Unemployment rates for people with visual impairments ranged from a low of 4% (in 1994-95) to a high of 19.8% (in 2011). Employment rates ranged from a low of 36.3% (in 2011) to a high of 44.2% (in 2017), based on ACS estimates. Estimates from all other data sources fall within this range. Based on ACS estimates, employment rates for people with visual impairments have not significantly increased over time. Large gaps in the employment and unemployment rates of people with visual impairments and those without disabilities exist, but these gap have significantly decreased over time. The smaller gaps in these rates for people with visual impairments and those with other disabilities have significantly increased over time.

Discussion: These results indicate consistent employment rates for people with visual impairments across time and across different measurement methods and questions. The lowest employment rate, and highest unemployment rate, were recorded following the great recession, and these rates have been improving since 2012.

Information for Practitioners: Approximately 44% of the U.S. population with a visual impairment is employed, while 10% of people with a visual impairment (who are in the labor force) are unemployed. The remaining 50.9% of the U.S. population with visual impairments are

not in the labor force.

Employment and Unemployment Rates of People who are Blind or Visually Impaired: Estimates from Multiple Sources 1994 – 2017

One of the most common statistic cited by advocates and professionals in the blindness field is the 70% unemployment rate of people with visual impairments (i.e., those with blindness or low vision). This statistic is believed to have originated from a 1985 report by Kirchner and Peterson that included national estimates from the 1970's of labor force participation rates of people with visual impairments. The report indicated that between 31 and 32% of people *with a work limitation* who reported serious difficulty seeing were in the labor force, and a large majority of those in the labor force were working (Kirchner & Peterson, 1985). These data indicated that approximately 70% of this population was not employed, which became incorrectly referred to as a 70% unemployment rate for people with visual impairments. Despite this statistic being more than 40 years old, it is still being cited (e.g., Girma, 2014; Levy, 2018; Myers, 2018).

Fortunately, more current national data have been collected about the labor force participation, employment rates, and unemployment rates of people with visual impairments. In fact, multiple sources of data collected over different time periods are available. Given that the most common statistic used to describe the work status of people with visual impairments is significantly out of date and cited inaccurately, we wanted to utilize the newer sources of data available to investigate the labor force status of people who are visually impaired, specifically focusing on their employment rates and unemployment rates. The primary research questions we sought to answer were:

1. What are the employment and unemployment rates of people with visual impairments?
2. Does the employment rate vary based on self-reported visual impairment versus

measured visual acuity?

3. Has the employment rate for people with visual impairments increased over time?
4. How do the employment rates and unemployment rates for people with visual impairments compare to people without disabilities and to people with other types of disabilities?

Method

Four data sources were utilized to investigate the labor force status of individuals with visual impairments in the United States. These data were collected at different time points, using different methods, but they all include nationally representative samples. A brief description of each data source is presented, along with information about where the estimates were obtained or how the labor force statistics were calculated. Summary information about the data sources and samples is provided in Table 1.

The calculation of employment and unemployment rates was based on definitions used by the federal government (https://www.bls.gov/cps/cps_htgm.htm). In this study, employment rate refers to the employment-population ratio, which is a measure derived by dividing the civilian non-institutionalized population who are employed (at the time of the survey) by the total civilian non-institutionalized population and multiplying by 100. Typically, an increase in the employment-population ratio (henceforth referred to as the employment rate) reflects economic growth due to a larger proportion of the population being employed; a decrease in the employment-population ratio results from fewer people in the population working, which could be associated with slow economic conditions. The unemployment rate is the number of unemployed people as a percentage of the civilian labor force. The civilian labor force consists of people classified as employed or unemployed, so those who are not actively looking for work

are not included in the labor force, and hence not considered unemployed. Given these definitions, the sum of the employment rate and unemployment rate is not meant to equal 100%. Equations (1) and (2) express the formulas for employment rate and unemployment rate.

$$Employment\ Rate = \frac{the\ number\ of\ employed\ people}{the\ total\ of\ people\ who\ were\ employed, unemployed,\ and\ not\ in\ the\ labor\ force} \quad (1)$$

$$Unemployment\ Rate = \frac{the\ number\ of\ people\ who\ were\ unemployed}{the\ total\ of\ people\ who\ were\ employed\ and\ unemployed} \quad (2)$$

National Health Interview Survey – Disability Supplement (NHIS-D)

The National Health Interview Survey, the primary source of information about the health of the civilian non-institutionalized population in the United States, has been conducted by the U.S. Census Bureau since 1957. The NHIS-D was a supplement to the NHIS in 1994 and 1995 that included additional questions related to disability. Of interest to this study is that it included a follow-up question to the question used to determine visual impairment. The standard question was "Does anyone in the family have serious difficulty seeing, even when wearing glasses or contact lenses?" If someone answered yes to this question, he or she was asked "Is this person legally blind?" To the authors' knowledge, this is the only national survey that has ever asked specifically about legal blindness, thus enabling us to identify a national sample of people who are legally blind. Kircher, Schmeidler, and Todorov (1999) analyzed the NHIS-D to evaluate the employment status of people who answered yes to the first question and who answered yes to the second question, including their employment rates and unemployment rates. We utilized the statistics found in this 1999 report for our study. The report only cited statistics to the whole number, therefore percentages reported for the NHIS-D data do not include decimal

places.

National Health and Nutrition Examination Survey (NHANES)

The NHANES is a program of studies conducted by the National Center for Health Statistics, which is part of the Centers for Disease Control and Prevention. NHANES has produced health and nutritional statistics for adults and children in the United States since the early 1960s by combining data from interviews and physical examinations. Distance visual acuity was measured in the vision component of NHANES from 1999 to 2008, first with presenting usual correction (one eye at a time), and then measured with objective refraction (best correction) if a study participant had 20/30 or worse visual acuity in an eye. Based on visual acuity measures, we identified people who were (a) visually impaired and (b) blind or legally blind for this study. The visually impaired group included participants whose visual acuity in the better-seeing eye was 20/60 or 20/80; the legally blind group included those with a better-seeing eye's acuity of 20/200 or 20/200+ and those who reported being blind in both eyes. Note that visual acuities between these identified values were not reported in NHANES (e.g., 20/70, 20/100).

We limited these NHANES samples to people between the ages of 18 and 64 years who answered questions from the occupation questionnaire, in order to determine their employment status. For each vision group, PROC SURVEYMEANS in SAS 9.4 was applied to calculate employment rates and unemployment rates ($percent$: $\hat{p}$) and associated standard errors of percent (SE_p). Then, we used standard errors of percent (SE_p) to calculate margin of errors ($MOEp_{90}$) and to develop 90% confidence intervals (*90% CI*) based on equations (3) and (4).

$$MOE_{p90} = 1.645 \times SE_p \quad (3)$$

$$90\%\ CI = \hat{p} \pm MOE_{p90} \quad (4)$$

Survey of Income and Program Participation (SIPP)

The SIPP is a national survey of the civilian non-institutionalized population conducted by the U.S. Census Bureau since 1984. Its purpose is to provide information about the income and program participation of individuals and households in the United States. It is a panel (longitudinal) survey with panels that range from 2.5 to 4 years. The SIPP includes various questions to identify people with disabilities. The question formerly utilized to identify people with visual impairments was "Does (this person) have difficulty seeing the words and letters in ordinary newspaper print even when wearing glasses or contact lenses if (this person) usually wears them?" Interviewers could document a yes, no, or person is blind response. If the person responded yes, he or she was asked "Is (this person) able to see the words and letters in ordinary newsprint at all?" This follow-up question allowed the identification of people with severe visual impairment. Reports have been generated that include the employment rates for people with visual impairments from the 1996, 2001, 2004, and 2008 SIPP panels (Brault, 2008, 2012; McNeil, 2001; Steinmetz, 2006). We utilized the statistics included in these reports for the current study with the exception of Steinmetz (2006), which utilized a different measure of employment than all of the other studies.

American Community Survey (ACS)

The ACS is a household survey administrated by the U.S. Census Bureau to replace the long form of the decennial census program. The ACS collects demographic, social, housing, and economic information annually using mailed questionnaires, telephone interviews, and visits from Census Bureau representatives across about 3.5 million household addresses. The ACS provides 1-year estimates for areas with a population of 65,000 or more and 5-year estimates for all other areas. Questions about employment status are included in the ACS to measure labor

force activities. Since 2008, the ACS has collected disability data for six disability types: vision difficulty, hearing difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty. Respondents who reported vision difficulty were categorized to the group of people with visual impairment, respondents who reported any one of the other five disability types were categorized to the group of people with other disabilities, and respondents who reported none of the six disability types were categorized to the people without disabilities group.

National ACS 1-year employment status estimates for 2009 to 2017 were obtained from American Fact Finder (AFF; https://factfinder.census.gov; Table B18120). Because data for 2008 was not available from AFF, we utilized the Disability Statistics calculator (http://www.disabilitystatistics.org/) to obtain 2008 employment rate estimates. Unemployment rate estimates were not available from this source, and it was not possible to calculate employment rate estimates for people with other disabilities; therefore these data are missing for 2008. Using formulas (1) and (2) with employment data by disability status and types provided by AFF, we estimated employment rates and unemployment rates for the three population groups identified previously. A MOE was also calculated for each estimate, with the formula provided by the U.S. Census Bureau (2008; see equation (5)). We followed the Census Bureau's standard of presenting a 90% CI based on the calculated MOE.

$$MOE_{p90} = \frac{\pm\sqrt{MOE_{num}^2 - (\hat{p}^2 \times MOE_{den}^2)}}{\hat{X}_{den}} \quad (5)$$

Data Analyses

To answer the first research question, employment and unemployment rates were either obtained from reports or calculated based on the available data (as described above). To answer the second research question, we evaluated the confidence intervals for the NHANES estimates

(representing visual impairment identified by measured visual acuity) and the 2005 SIPP estimates (representing visual impairment identified by self-report), as these are the two surveys that cover the same time period. If the confidence intervals overlap, there is not a significant difference between the two types of measurement. To answer the third research question, we utilized two techniques with the ACS data. We employed Kendall's tau-b, a nonparametric measure of association similar to a correlation coefficient, to evaluate the association of employment rates for people with visual impairments over time (2008 to 2017). A nonparametric measure was chosen because the data do not appear to be entirely linear. We also compared year to year estimates by evaluating the confidence intervals for each years' estimates to determine whether the differences identified were significant. We utilized several techniques to answer the fourth research question. First, we developed time series plots that display the employment rates and unemployment rates for each group to allow visual comparison. We then calculated the difference between people with visual impairments and the other two groups' ACS estimates and examined whether these gaps changed over time by utilizing a simple linear regression, regressing year on employment rates and unemployment rates individually.

Results

Table 2 presents information about the employment and unemployment rates of people with visual impairments over time, based on the data sources, which provides an answer to research question 1. To summarize, employment rates for people with visual impairments have ranged from a low of 36.3% (in 2011) to a high of 44.2% (in 2017), based on ACS estimates. Estimates from all other data sources fall within this range. Unemployment rate estimates have ranged widely, from a low of 4% (in 1994-95) to a high of 19.8% (in 2011). Utilizing data from Table 2 to compare NHANES and 2005 SIPP estimates, we can observe that the confidence

intervals for the overall population, as well as those with visual impairment and those with severe visual impairment, overlap, indicating that the estimates based on measured visual acuity and self-reported visual impairment do not significantly differ.

The association between employment rates of people with visual impairments and year was $\tau = .47$ ($p = .06$), indicating that although employment rates have increased over time, this association was not statistically significant. Comparing year to year estimates of the data (see Table 2), we can observe that the 2008 employment rate was significantly higher than the employment rates from 2009 to 2015. There is not a significant difference between the employment rate in 2008 and the rates in 2016 or 2017. However, employment rates have steadily increased since 2012. There was a large increase in the employment rate in 2013, which represented a significant increase over the rates of 2009 to 2012. There were also significant increases in the employment rates from 2014 to 2015, and from 2015 to 2016.

Time series plots displaying the employment rates and unemployment rates for people with visual impairments, people with other types of disabilities, and people without disabilities are provided in Figure 1 and 2, respectively. (Note that data for people with other types of disabilities are not available for 2008, and unemployment rate data are not available for any group in 2008.) The differences in employment rates for people with visual impairments and the other two groups are presented in Table 3. We can observe that the employment rate gap between people with visual impairments and those without disabilities increased during the recession and its aftermath, but has decreased since 2015. The negative trend reached statistical significance ($F(1,8) = 6.30$, $p = .04$, adjusted $R^2 = .37$). The unemployment rate gap between people with visual impairments and those without disabilities also increased during the recession and its aftermath, but has steadily decreased since 2011. This negative trend reached statistical

significance ($F(1,7) = 24.32$, $p = .002$, adjusted $R^2 = .74$). The employment rate gap between people with visual impairments and those with other types of disabilities has significantly increased over time ($F(1,7) = 87.50$, $p < .0001$, adjusted $R^2 = .92$). The unemployment rate gap between people with visual impairments and those with other types of disabilities has also significantly increased over time, ($F(1,7) = 18.77$, $p = .003$, adjusted $R^2 = .69$).

Discussion

We will first acknowledge some limitations of this study. We relied on existing data analyses (conducted by other authors) for estimates from NHIS-D and SIPP data, which included estimates based on slightly different age groups and did not provide margins of error for NHIS-D estimates. The four sources of data are primarily from different time periods, which coincide with different economic conditions that impact these labor force statistics. In addition, the four data sources utilized different methods to identify their visually impaired populations, including how (and whether) severe visual impairment was identified. Finally, NHANES data only allowed us to identify people as visually impaired based on their visual acuity, so those with significant field deficits would not have been included.

Despite these limitations, our results indicate surprisingly consistent employment rates across time and across different measurement methods and questions, with the exception of the decline in employment rates during the recent great recession (which spanned December 2007 – June 2009) and its aftermath. Of importance is that the estimates based on self-reported visual impairment and measured visual acuity were not significantly different. Although these comparisons are not perfect (given the limitations mentioned), they do allow us to have some confidence in the statistics provided by self-reported visual impairment data. We know that many people function with impaired vision due to uncorrected refractive error (Sherrod et al., 2014),

which makes it likely that the sample identified as visually impaired by self-report questions includes some people who fall into this category. Although the samples identified with different methods may not match exactly, the employment estimates are similar.

Conversely, unemployment rate estimates for people with visual impairments across time and data sources are not consistent. This may be related to the economic conditions at the time and the overall unemployment rate for the general population. Interestingly, the estimated unemployment rates for people with visual impairments from the time period 1994-95 (NHIS-D) and 1999-2008 (NHANES) are lower or only slightly higher than the unemployment rates for the entire population during those time periods (Bureau of Labor Statistics, 2018). The ACS data tell a different story, as they exhibit a large gap between the unemployment rates of people with visual impairments and people without disabilities. This gap was much larger during the great recession and has significantly decreased over time, but interestingly it has consistently stayed at a rate of approximately double the unemployment rate of people without disabilities. The higher rates of unemployment for people with visual impairments indicate that they experience more barriers in the workplace. The increase in the unemployment rate also indicates that a larger proportion of this population is attempting to work than in the past. Because of the barriers they experience it may take longer for them to find employment, but the first step to employment is being an active member of the labor force.

With the ACS data, we have a reliable, consistent source of information about the employment status of people with visual impairments. The 10 years of data that are now available indicate that the employment rates for people with visual impairments have changed over time, but this change appears to primarily be in response to the great recession, with a decrease in employment rates during this time and its aftermath, and an increase in employment

rates since 2012. Although the employment rates for people with visual impairments have increased since the great recession, this trend did not reach statistical significance, due to the higher rate of employment observed in 2008. This is approximately the same pattern observed in people without disabilities, although the variability in employment rates for this group was lower. The 2017 employment rates for people with visual impairments are not significantly different than the 2008 employment rates, indicating that employment has not improved for this population in the past 10 years. The current employment rates are also similar to even earlier estimates provided by NHIS-D and SIPP data.

A positive finding from this study about the employment status of people with visual impairments is that the gap in employment rates between them and people without disabilities has decreased over time, although a large gap still exists. The positive employment gap for people with visual impairments compared to people with other disabilities has increased over time, due to the larger increases in employment that people with visual impairments have experienced. Given the upward trend of employment rates and the positive status of the economy, it will be important to continue to monitor ACS employment rates to evaluate future improvements in employment for people with visual impairments. These annually updated data, along with data from the Current Population Survey, are provided on the authors' website (link to be added after blind review).

The ACS data are the primary source for national estimates on the employment of people with disabilities, and it is essential to our understanding of the long-term employment status of people with visual impairments. However, a significant drawback of the survey is that it does not include a way to identify severity of visual impairment. For many years the SIPP included a follow-up question to identify severity of visual impairment (and other conditions), but the

current SIPP does not include this follow-up question. We advocate for the addition of a follow-up question for people who answer yes to the question about a visual problem in the ACS. The question could follow the format of the NHIS-D (Are you legally blind?) or ask for level of difficulty with seeing (e.g., unable to see at all, minimal amount of vision, moderate amount of vision). Fortunately the redesign of the NHIS, scheduled for 2019, is to include a new question about difficulty seeing in which the respondent is able to rate his/her level of difficulty seeing, from no difficulty to unable to see at all. This change represents a vast improvement to the information available about the level of visual impairment. A question such as this would also be an excellent option for the ACS and could improve our understanding of the association between severity of vision loss and employment.

Conclusion

Since the mid-1990s, multiple sources of national data have provided estimates about the labor force status of people with visual impairments. Advocates and professionals in the field should take note of the current statistics presented in this paper, and stop using the outdated and inaccurate statistic that 70% of people with visual impairments are unemployed. The most current ACS data indicate that approximately 44% of the U.S. population with a visual impairment is employed, while 10% of people with a visual impairment (who are in the labor force) are unemployed. This leaves approximately half of the U.S. population of people with visual impairments (50.9%) out of the labor force. This portion of the population that has removed itself from the labor market may be of particular concern to advocates and professionals. To improve the overall employment rate for people with visual impairments, more members of this population must enter the labor force, making reasons for lack of participation in the labor market an important avenue for future investigation.

References

Brault, M. (2008). *Americans with disabilities: 2005*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau. Retrieved from https://www2.census.gov/library/publications/2008/demo/p70-117.pdf

Brault, M. (2012). *Americans with disabilities: 2010*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau. Retrieved from https://www2.census.gov/library/publications/2012/demo/p70-131.pdf

Bureau of Labor Statistics (2018). *Labor force statistics from the Current Population Survey: Unemployment rate, 1947-2017*. Retrieved from https://data.bls.gov/timeseries/LNU04000000?periods=Annual+Data&periods_option=specific_periods&years_option=all_years

Girma, H. (2014). Fighting fate: A seventy percent unemployment rate. *Work, 48*, 299–301.

Kirchner, C., & Peterson, R. (1985). Employment: Selected Characteristics. In C. Kirchner (Ed.), *Data on blindness and visual impairment in the U.S.: A resource manual on characteristics, education, employment and service delivery* (pp. 161–169). New York: American Foundation for the Blind.

Kirchner, C., Schneidler, E., & Todorov, A. (1999). *Looking at employment through a lifespan telescope: Age, health, and employment status of people with serious visual impairment*. Mississippi State: National Research and Training Center on Blindness and Low Vision. Retrieved from https://www.blind.msstate.edu/inc/downloadfile.php?id=694&itk=bddffe3d7fff108d3410b52fce30e714

Levy, J. (2018). Reducing the unemployment rate for people who are blind or visually impaired.

Retrieved from https://www.indystar.com/story/sponsor-story/bosma/2018/

McNeil, J. (2001). *Americans with disabilities: 1997*. U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau. Retrieved from https://www2.census.gov/library/publications/2001/demographics/p70-73.pdf

Myers, C. (2018). High rate of unemployment for the blind. Retrieved from https://work.chron.com/high-rate-unemployment-blind-14312.html

Sherrod, C. E., Vitale, S., Frick, K. D., & Ramulu, P. Y. (2014). Association of vision loss and work status in the United States. *JAMA Ophthalmology*, *132*(10), 1239–1242.

Steinmetz, E. (2006). *Americans with disabilities, 2002*. U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2006/demo/p70-107.pdf

U.S. Census Bureau. (2008). *A compass for understanding and using American community survey data.* Washington, D.C.: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau.

Table 1

Description of Data Sources

Data source	NHIS-D[a]	NHANES[b]	SIPP[c]	ACS[d]
Years of data	1994-1995 (data pooled)	1999-2008 (data pooled)	1997, 2005, 2010	2009-2017
Sample Age	18 to 69	18 to 64	21 to 64	18 to 64
How VI determined	Self-report	Measured visual acuity	Self-report	Self-report
VI definition	Has serious difficulty seeing	20/60 or 20/80	Difficulty seeing words/ letters in newsprint	Blind or has serious difficulty seeing
Severe VI definition	Legally blind	20/200 or worse; self-reported blindness	Unable to see words/ letters in newsprint	NA

Note. VI = Visual impairment; NA = not available in the data.
[a] NHIS-D = National Health Interview Survey – Disability Supplement.
[b] HNANES = National Health and Nutrition Examination Survey.
[c] SIPP = Survey of Income and Program Participation.
[d] ACS = American Community Survey.

Table 2

Estimated U.S. Employment Rates and Unemployment Rates for Individuals with Visual Impairments

Data Source	Empl Rate (Overall) % (90% CI)	Empl Rate (VI) % (90% CI)	Empl Rate (Severe VI) % (90% CI)	Unempl Rate (Overall) % (90% CI)
NHIS-D[a]	41 (NA)	44 (NA)	30 (NA)	4 (NA)
NHANES[b]	38.3 (34.1, 42.5)	48.1 (38.4, 57.8)	30.7 (28.6, 32.7)	6.49 (6.44, 6.53)
SIPP[c]				
1997	41.5 (NA)	44.0 (NA)	29.9 (NA)	NA
2005	40.8 (37.4, 44.2)	44.2 (40.4, 48.0)	26.2 (19.2, 33.2)	NA
2010	41.7 (38.9, 44.5)	43.9 (40.8, 47.0)	34.0 (29.1, 38.9)	NA
ACS[d]				
2008	43.1 (42.4, 43.8)	NA	NA	NA
2009	38.3 (37.8, 38.8)	NA	NA	17.7 (17.2, 18.2)
2010	37.2 (36.8, 37.6)	NA	NA	19.1 (18.4, 19.8)
2011	36.3 (35.8, 36.8)	NA	NA	19.8 (19.1, 20.5)
2012	36.9 (36.4, 37.4)	NA	NA	17.7 (17.1, 18.4)
2013	39.9 (39.4, 40.4)	NA	NA	15.7 (15.2, 16.2)
2014	40.2 (39.7, 40.7)	NA	NA	13.4 (12.9, 13.9)
2015	41.8 (41.3, 42.3)	NA	NA	11.5 (11.1, 11.9)
2016	43.5 (43.1, 43.9)	NA	NA	10.6 (10.3, 10.9)
2017	44.2 (43.8, 44.7)	NA	NA	10.0 (9.6, 10.4)

Note. NA = data not available. Empl Rate = Employment Rate. Unempl Rate = Unemployment Rate.
[a] NHIS-D = National Health Interview Survey – Disability Supplement.
[b] HNANES = National Health and Nutrition Examination Survey.
[c] SIPP = Survey of Income and Program Participation.
[d] ACS = American Community Survey.

Table 3

Employment Rate and Unemployment Rate Gaps for People with Visual Impairments Compared to People Without Disabilities and People with Other Disabilities

	Visual Impairments vs. Without Disabilities		Visual Impairments vs. Other Disabilities	
	Employment Rate	Unemployment Rate	Employment Rate	Unemployment Rate
2008	-34.7	NA	NA	NA
2009	-36.0	8.5	3.6	-0.4
2010	-35.6	9.0	4.5	-1.4
2011	-36.8	10.3	4.2	-0.3
2012	-36.9	9.0	4.8	-1.2
2013	-34.5	7.9	7.0	-2.1
2014	-35.2	6.7	7.2	-2.6
2015	-34.2	5.7	8.5	-3.0
2016	-33.3	5.3	9.3	-2.8
2017	-33.0	5.2	8.8	-2.4

Note. Data is based on American Community Survey (ACS) 1-year estimates. Negative values indicate people with visual impairments have lower rates than the comparison group, while positive values indicate they have higher rates than the comparison group. NA = data not available.

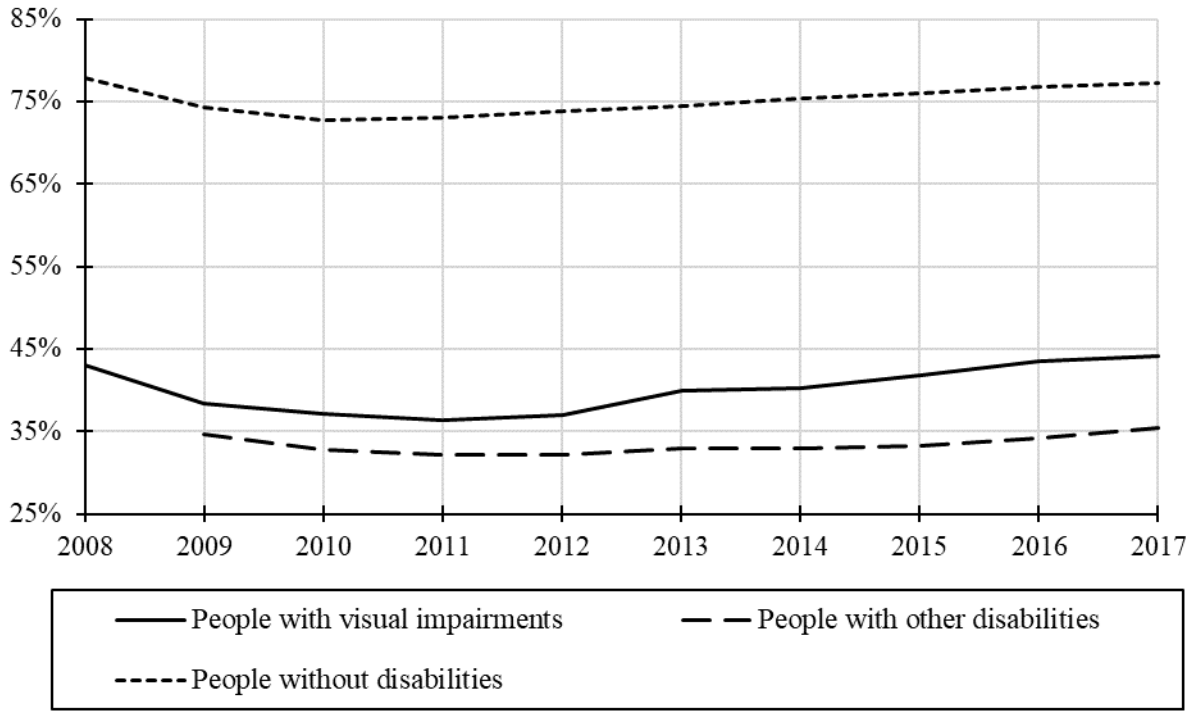

Figure 1. Employment rate across time for people with visual impairments, people with other types of disabilities, and people without disabilities (2008-2017). Employment rate in 2008 is not available for people with other disabilities. Data are based on ACS 1-year estimates.

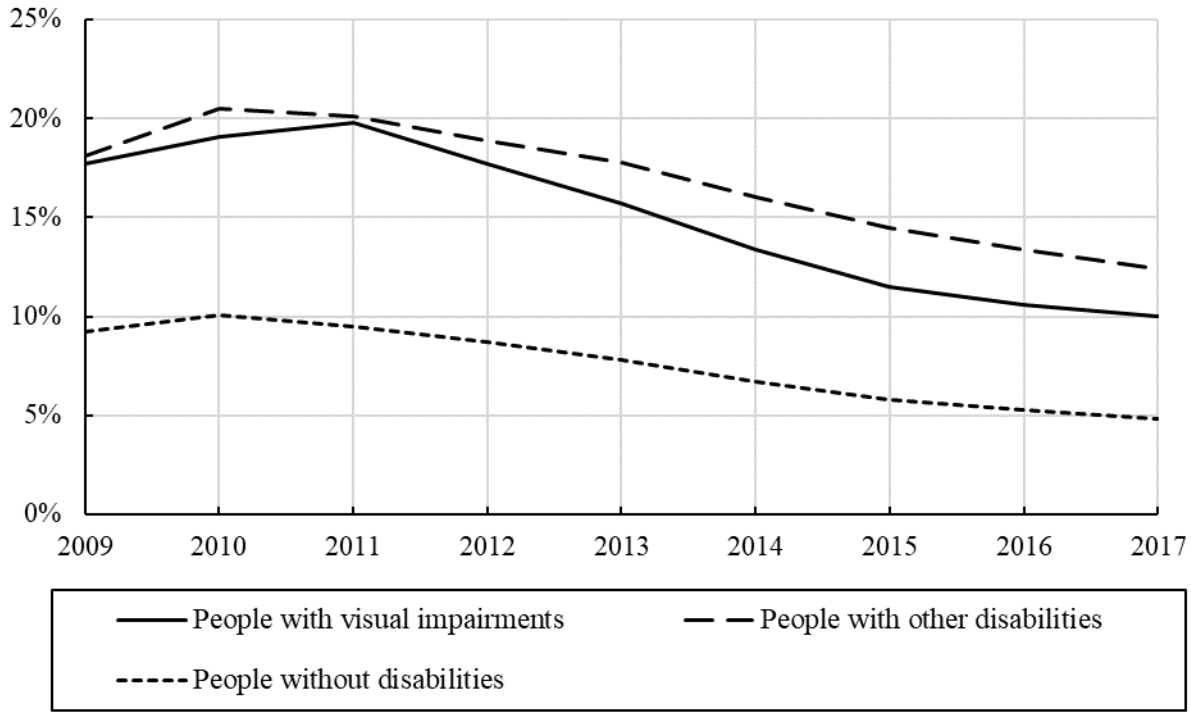

Figure 2. Unemployment rate across time for people with visual impairments, people with other types of disabilities, and people without disabilities (2009-2017). Data are based on ACS 1-year estimates.