

Disability, Voter Turnout, and Polling Place Accessibility*

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Objective. Polling place inaccessibility may contribute to the disability gap in voter turnout, both directly by making voting more difficult for people with disabilities, and indirectly by sending the message that people with disabilities are not expected to participate in the political sphere. We explore the role of polling place inaccessibility by examining voter turnout and reports of voting difficulties among people with and without disabilities in the 2012 elections. *Method.* We use the Census Bureau's Voting and Registration Supplement (VRS) and a newly constructed national household survey following the 2012 elections. *Results.* Consistent with past findings, the disability turnout gap is reduced but not eliminated when controlling for standard predictors of voter turnout. Nearly, one-third (30 percent) of voters with disabilities reported difficulty in voting at a polling place in 2012, compared to only 8 percent of voters without disabilities. We find that difficulties in voting predict lower perceptions of the influence people with disabilities have in the political process. This in turn is a significant predictor of voter turnout among people with disabilities, supporting the idea that voting difficulties depress turnout. Majorities of people both with and without disabilities said they would prefer voting in person in a polling place in the next election. *Conclusion.* The results point to the potential role of polling place accessibility in voter turnout, and the gains from wider adoption of best practices to reduce barriers and make the voting process more fully accessible.

Voting difficulties have received increased attention recently as exemplified by public debates over photo ID requirements and problems with long lines in the 2012 elections. A number of voting difficulties were assessed by the Presidential Commission on Election Administration (2014) appointed by President Obama. As the report discusses, people with disabilities are one of the groups most likely to face voting difficulties. Some problems that citizens without disabilities find inconvenient, such as long lines, can pose much larger (and sometimes insurmountable) obstacles to those with disabilities.

There are at least 36 million voting-age people with disabilities in the United States, representing one of seven voting-age people, and the number is expected to grow with the aging of the population (StatsRRTC, 2014). Public policies, often in the guise of paternalistic concern, have historically isolated people with disabilities and often excluded them from citizenship (U.S. Commission on Civil Rights 1983:17–22). While people with disabilities have made tremendous political gains over the past few decades, most notably with the passage of the Americans with Disabilities Act (ADA) in 1990, they continue to have lower levels of voter turnout than otherwise similar people without disabilities (Schur

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and Adya, 2013). This raises concerns that people with disabilities remain politically marginalized and their interests may be neglected by politicians and elected officials.

Polling place accessibility is a basic factor that can affect political participation. Inaccessible polling places may reduce turnout not only by making it more difficult for citizens with disabilities to vote, but also by sending the message that they are not fully welcome or expected to exercise the most basic rights of citizenship.

This article presents new evidence on people with disabilities and voter turnout, including voting experiences and preferred voting methods. We analyze both 2008–2012 Census Bureau data and a 2012 survey with more extensive data on voting experiences, polling place difficulties, feelings of efficacy, voting by mail, and preferences over how to vote. The conclusion discusses the implications of these results for policy and future research.

Theory and Prior Literature

The theory on disability and political participation has been reviewed elsewhere (Schur et al., 2002; Schur and Adya, 2013). Briefly, disability may decrease political participation through lower resources (particularly education and income) (Schur, Kruse, and Blanck, 2013:28–31, 146–55), greater social isolation that limits recruitment opportunities (Harris, 2010; Schur, Kruse, and Blanck, 2013:130–32), and stigma and discrimination that can reduce feelings of personal and political efficacy (Westerholm et al., 2006). Stigma and discrimination may, however, motivate other individuals to become politically active, especially on disability-related issues (Anspach, 1979; Scotch, 1988).

Twelve studies over the 1992–2010 elections using differing samples and definitions of disability all find lower voter turnout among people with disabilities, as reviewed in Schur and Adya (2013). While standard measures of resources, recruitment, and psychological factors play a role, they do not fully explain the lower turnout of people with disabilities (Schur et al., 2002). Turnout is lowest among people who report difficulty going outside their homes alone, and those who are not able to drive (Schur and Kruse, 2000; Schur et al., 2002). Voting by mail can be an attractive alternative for many people with mobility impairments or other transportation difficulties, and is about twice as high among voters with disabilities (Schur et al., 2002; Schur and Adya, 2013). Even with the option of voting by mail, however, turnout is lower among people with mobility problems, suggesting that limited mobility may have social and psychological effects through decreased social interactions, feelings of efficacy, and identification with mainstream society. Difficulty finding and getting to the polling place lowers voter turnout, and people with mobility limitations have lower voter turnout in areas where streets are in poor condition (Clarke et al., 2011; Brady and McNulty, 2011). The Government Accountability Office (GAO, 2009) found that only 27 percent of polling places in 2008 had no potential impediments to people with disabilities, which was an improvement over the 16 percent figure in 2000. While the 2009 GAO report provided valuable information, it only addressed physical obstacles, such as steps and blocked entrances, and did not measure other potential problems such as difficulty reading or seeing the ballot, understanding how to vote or use the voting equipment, or standing in long lines. In this article, we use a 2012 survey to investigate the full range of voting difficulties and their effects on attitudes and behavior.

Data and Method

The first data source is the Census Bureau's Voting Research Supplement (VRS), conducted as a supplement to the monthly Current Population Survey (CPS) following national

elections in November of even-numbered years. The CPS is a monthly representative survey of the U.S. population designed primarily to obtain employment information. The Bureau of Labor Statistics, which co-sponsors the survey, added six questions to identify disability status starting in June 2008 (see <http://www.bls.gov/cps/cpsdisability.htm/>).

The second data source comes from the Disability and Voting Survey (DVS) of 3,022 voting-eligible citizens following the November 2012 elections. This survey was designed and coordinated by the authors. We use the Census Bureau's six-question set to identify disability. To capture impairments or conditions that may not be covered, a seventh question asked about any conditions that limit major life activities (to address potential limitations of the Census measure identified by Burkhauser, Houtenville, and Tennant, 2014). This seventh question was taken from 1998 and 2000 national surveys on disability and voter turnout (Schur et al., 2002). The basic voting questions were drawn from the Census Bureau's Voting and Registration Supplement. Since there are very few extant questions about voting experiences inside the polling place, we developed and tested new questions with other members of the Research Alliance for Accessible Voting. Questions about actual polling place difficulties were asked only of respondents who reporting voting in a polling place since 2002, and the remainder were asked parallel questions about what types of difficulties they would expect to encounter if they wanted to vote in a polling place. Questions on internal and external political efficacy, political recruitment, and religious attendance were taken from the American National Election Survey. Demographic questions were based on the Census Bureau's Current Population Survey. Two measures of disability group efficacy were taken from prior national surveys (Schur, Shields, and Schriener, 2003); these were based on research showing the importance of group efficacy in political participation among African Americans (e.g., Chong and Rogers, 2005). All survey questions are available on request.

The survey was a representative random-digit telephone survey, including both landlines and cell phones in the 48 contiguous states, of 3,022 U.S. citizens who were eligible to vote in the 2012 elections, conducted by a professional survey firm. Each person contacted was first asked a series of questions to establish the number of people in the household who were eligible to vote in 2012, and was then asked seven questions to establish the number of people with a disability. The households were divided into disability and nondisability households, and in the disability households the interviewer asked to speak with the person with a disability (or if there was more than one, the person with the most recent birthday to ensure random selection). People with disabilities were oversampled for the remainder of the questions so that 2,000 of the final respondents were people with disabilities, while people without disabilities constitute the remaining 1,022 respondents. The oversampling helped ensure both that the disability sample was large enough to reach solid conclusions about their experiences and to analyze subgroups within the disability sample. In cases where the disability prevented the person from speaking on the phone, a proxy was used. All results reported in this article have been adjusted using weights to adjust for oversampling, eligible respondents in household, and demographic characteristics.

We predict voting and voting difficulties in Tables 2 and 4 using probit regressions, and psychological variables in Table 5 using OLS regressions. While overreporting of voting is likely, there is no reason to believe it will bias estimates of the disability voting gap.¹

¹While no studies have related disability to overreporting, there are mixed results on characteristics related to both disability and overreporting. People with disabilities have higher average age, which is related to increased overreporting in Brenner (2012) but not in Kanazawa (2005), while their lower average education, income, religious attendance, and contact by political parties (Schur, Kruse, and Blanck, 2013) would predict less overreporting according to some but not all research (Silver, Anderson and Abramson, 1986; Bernstein,

TABLE 1
Voting by Disability Status, 2008–2012

	Voter Turnout			Disability Gap	Number of Voters (millions)
	2008	2010	2012	2012	2012
No disability	64.5%	45.9%	62.5%		117.3
Any disability	57.3%	42.8%	56.8%		15.6
Disability gap	-7.2%**	-3.1%**	-5.7%**	-5.7%**	
Type of disability:					
Hearing impairment	63.1%	50.0%	63.2%	0.7%	5.0
Visual impairment	56.8%**	39.5%**	57.3%**	-5.2%**	2.4
Cognitive impairment	46.1%**	29.6%**	44.8%**	-17.7%**	3.7
Mobility impairment	56.8%**	43.5%**	56.3%**	-6.2%**	9.3
Difficulty dressing or bathing	46.4%**	32.4%**	46.7%**	-15.8%**	2.2
Difficulty going outside alone	45.7%**	32.9%**	47.3%**	-15.2%**	4.6
No disability	80,333	82,144	81,855		
Any disability	12,027	12,064	12,456		

NOTE: Based on microdata analysis of Census Bureau's Voting and Registration Supplement.
*Difference from nondisability sample is significant at $p < 0.05$; ** $p < 0.01$.

Results

Voter Turnout

People with disabilities were less likely to report voting in 2012 relative to people without disabilities, consistent with survey results for prior elections. As shown in Table 1, 56.8 percent in the VRS data reported voting, compared to 62.5 percent of eligible citizens without disabilities.² This difference is significant at $p < 0.01$. The disability turnout gaps were 7.2 percent in 2008 and 3.1 percent in 2010 compared to 5.7 percent in 2012. The smaller gap in 2010 reflects especially low turnout in midterm elections by younger voters, who are less likely to have disabilities. The gap is small and not significant for people with hearing impairments, and largest for those with cognitive impairments.

When demographic characteristics (age, gender, race/ethnicity, marital status, and education) are held constant, the disability gap is 7.3 percentage points and remains highly significant, as shown in column 1 of Table 2.³ The slight widening of the gap relative to the raw gap of 5.7 percentage points reflects factors related to age: people with disabilities are older on average, so the simple raw gap reflects a comparison of older people with disabilities to younger people without disabilities. Older people are more likely to vote in general, so the older average age of people with disabilities pulls up their voting rate. Controlling for age, however, removes this upward effect of age on the turnout of people

Chadha, and Montjoy, 2001, 2003; Kanazawa, 2005; Holbrook and Krosnick, 2010; Brenner, 2012). The likely opposite effects of age versus other characteristics, and the mixed results from prior research on determinants of overreporting, do not point to any clear bias in the estimated disability voting gap due to differences in overreporting.

²The overall rate of turnout is higher than the rate calculated on actual votes cast, which was 57.5 percent, <http://bipartisanpolicy.org/news/press-releases/2012/11/2012-election-turnout-dips-below-2008-and-2004-levels-number-eligible-vo>. This reflects overreporting, discussed in note 1.

³Age is presented here using three dummy variables allowing discontinuous changes among age cohorts. The results of interest were similar when age is entered using linear and squared terms.

TABLE 2
Predicting Voting in 2012

Data Source	(1) Census	(2) DVS	(3) DVS	(4) DVS	(5) DVS	(6) DVS - No Disab.	(7) DVS - Disability
Disability-Census def.	-0.073*** (-12.26)	-0.108*** (-3.231)					
Disability-broader def.			-0.120*** (-3.659)	-0.072** (-2.200)	-0.075** (-2.252)		
Recruitment							
Talked to by political party				0.080** (2.493)	0.076** (2.369)	0.057 (1.596)	0.0659 (1.219)
Talked to by someone else				0.010 (0.308)	0.011 (0.358)	0.014 (0.408)	0.0181 (0.357)
Employed				0.0146 (0.428)	0.008 (0.248)	-0.018 (-0.532)	0.206*** (3.213)
Union member				0.0106 (0.193)	0.006 (0.107)	0.018 (0.379)	-0.266* (-1.675)
Attend religious svcs. at least 1/mo.				0.059** (2.148)	0.050* (1.833)	0.047 (1.566)	0.0941** (2.025)
Meet regularly with group				0.034 (1.151)	0.037 (1.279)	0.025 (0.839)	0.126** (2.444)
Psychological factors							
Internal efficacy				0.025*** (3.652)	0.023*** (3.567)	0.016*** (2.274)	0.0434*** (4.276)
External efficacy				0.005 (0.926)	0.006 (0.951)	0.011* (1.749)	-0.00639 (-0.716)
People w/disabs. have influence in govt./public affairs					0.019* (1.924)	0.012 (1.020)	0.0495*** (3.260)
Govt. officials treat people w/disabs. w/respect					0.007 (0.643)	0.019 (1.520)	-0.0153 (-0.923)

continued

TABLE 2
Continued

Data Source	(1) Census	(2) DVS	(3) DVS	(4) DVS	(5) DVS	(6) DVS - No Disab.	(7) DVS - Disability
Resources							
HS diploma	0.131*** (20.11)	0.131*** (2.888)	0.128*** (2.888)	0.114*** (2.850)	0.116*** (2.920)	0.126*** (2.744)	0.0981 (1.585)
Some college	0.247*** (37.88)	0.147*** (3.535)	0.145*** (3.466)	0.109*** (2.655)	0.111*** (2.748)	0.112** (2.456)	0.0659 (1.000)
Associate's degree	0.244*** (33.67)	0.154*** (3.654)	0.153*** (3.596)	0.112** (2.520)	0.108** (2.444)	0.0843* (1.667)	0.146* (1.840)
Bachelor's degree	0.319*** (49.89)	0.217*** (5.719)	0.215*** (5.616)	0.157*** (3.871)	0.157*** (3.924)	0.150*** (3.471)	0.107 (1.364)
Graduate degree	0.326*** (47.64)	0.203*** (5.103)	0.201*** (4.983)	0.141*** (3.078)	0.144*** (3.164)	0.122** (2.509)	0.229** (2.391)
HH income (13 dummies)	No	No	No	Yes	Yes	Yes	Yes
Demographics							
Female	0.033*** (8.889)	0.033 (1.148)	0.030 (1.076)	0.041 (1.475)	0.042 (1.532)	0.030 (1.019)	0.0786 (1.623)
African-American	0.106*** (17.43)	0.085** (2.093)	0.087** (2.147)	0.100** (2.508)	0.098** (2.477)	0.085** (2.047)	0.0729 (0.938)
Other race	-0.122*** (-14.55)	0.090* (1.843)	0.091* (1.867)	0.097** (2.266)	0.103** (2.437)	0.100** (2.363)	-0.0115 (-0.133)
Hispanic	-0.054*** (-8.158)	-0.030 (-0.618)	-0.026 (-0.522)	0.015 (0.340)	0.022 (0.502)	-0.011 (-0.232)	0.0801 (1.015)
Age 30-49	0.090*** (17.52)	0.058 (1.422)	0.061 (1.511)	0.087** (2.305)	0.091** (2.451)	0.082** (2.144)	0.155* (1.952)
Age 50-64	0.173*** (34.45)	0.159*** (4.356)	0.162*** (4.441)	0.162*** (4.631)	0.162*** (4.715)	0.151*** (4.309)	0.234*** (3.218)
Age 65+	0.243*** (44.88)	0.177*** (5.170)	0.179*** (5.274)	0.183*** (5.864)	0.184*** (5.895)	0.147** (4.760)	0.338*** (4.964)
Married, spouse present	0.087*** (21.62)	0.129*** (4.272)	0.125*** (4.120)	0.099*** (3.283)	0.107*** (3.562)	0.078** (2.321)	0.187*** (3.825)
Pseudo R ²	0.099	0.15	0.1529	0.230	0.242	0.267	0.2613
n	94,311	3,022	3,022	3,010	3,010	1,010	1,994

NOTE: Dep. var. = voted in 2012. Coefficients represent marginal effects from probit regressions. Robust z-statistics in parentheses. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

with disabilities, producing a larger gap between otherwise similar people with and without disabilities.

The VRS does not have other standard determinants of voter turnout, but these were collected in the DVS. A specification identical to that in column 1 but using the DVS is shown in column 2, where it can be seen that the estimated gap in turnout is a highly significant 10.8 percentage points. While slightly larger than the estimated gap in column 1, the difference between the gaps in the two surveys is not large enough to be statistically significant.

Can the remaining gap be explained by other standard predictors of turnout? The rest of Table 2 addresses this using variables from the DVS that are not available in the Census data. Column 3 shows that the disability gap widens slightly—to 12.0 percentage points—when using the seven-question set of disability identifiers, which contains an extra question to capture disabilities. The disability gap decreases to 7.2 points in column 4 when controlling for household income, political recruitment networks, and internal and external political efficacy. The gap is essentially unchanged, and remains significant, in column 5 when further controlling for the perceived influence and respect received by people with disabilities on government and public affairs.

The regressions so far assume that the coefficients for the control variables are the same for people with and without disabilities, but the determinants of voting may differ. Columns 6 and 7 present regressions separately for people with and without disabilities. Employment status makes a difference in turnout for people with disabilities but not for those without disabilities (significantly different at $p < 0.05$), perhaps reflecting the particular economic and social hardships faced by nonemployed people with disabilities and the positive role that employment can play in increasing social contact, economic resources, and feelings of efficacy (Schur et al., 2002). Religious attendance, regular meetings with groups, and the perception that people with disabilities have influence on government and public affairs are significant predictors of turnout only in the disability sample (although the equality of coefficients between the samples cannot be rejected). The first two results suggest the impact of social isolation on many people with disabilities (Schur, Kruse, and Blanck, 2013:130–33), while the third result indicates that people with disabilities become more motivated to vote not only from a greater sense of individual efficacy, but from a greater sense of group efficacy when they feel people with disabilities are able to influence the political process.

Polling Place Difficulties

Citizens with disabilities who voted in a polling place in 2012 were more likely than those without disabilities to report some type of difficulty in voting. As shown in Table 3, almost one-third (30.1 percent) of voters with disabilities reported one or more difficulties in voting, compared to about one-twelfth (8.4 percent) of voters without disabilities. This difference is strongly significant. Applied to the population of voters with disabilities, this indicates that about 3.4 million voters with disabilities experienced some type of difficulty in voting in a polling place in 2012.

Looking at the specific problems, over one-tenth (11.7 percent) reported difficulty in reading or seeing the ballot, while 10.3 percent reported difficulty in understanding how to vote or operate the voting equipment. These difficulties were significantly less common among voters without disabilities (0.9 and 1.3 percent, respectively, in column 2). The next most common difficulties among voters with disabilities were waiting in line (8.3 percent),

TABLE 3
Polling Place Difficulties in 2012

	Any Disability (1)	No Disability (2)	Type of Impairment			Disability Severity		
			Hearing (3)	Visual (4)	Cognitive (5)	Mobility (6)	No Need for Help in Daily Activities (7)	Need Help in Daily Activities (8)
When you voted in the polling place, did you have any:								
1 Difficulty in finding or getting to the polling place	5.9%	1.6%	1.6%	11.2%	11.6%	3.8%	1.6%	10.5%
2 Difficulty in getting inside the polling place (for example, steps)	3.6%**	0.2%	6.4%	3.2%*	4.1%	4.4%**	2.0%**	5.4%**
3 Difficulty waiting in line	8.3%*	3.5%	8.9%	4.6%	7.7%	9.4%*	10.6%*	5.8%
4 Difficulty reading or seeing the ballot	11.7%**	0.9%	12.6%**	21.5%**	20.0%**	8.2%**	6.5%**	17.2%**
5 Difficulty understanding how to vote or use the voting equipment	10.3%**	1.3%	6.4%	14.6%*	20.1%**	9.7%**	3.7%*	17.3%**
6 Difficulty communicating with poll workers or other officials at the polling place	1.6%	1.2%	2.0%	2.1%	1.0%	1.6%	1.6%	1.6%
7 Difficulty writing on the ballot	4.5%	0.3%	0.7%	2.9%*	7.8%	1.0%	2.0%	7.2%
8 Difficulty operating the voting machine	1.3%	0.9%	2.6%	1.8%	1.4%	1.8%	0.5%	2.2%
9 Other type of difficulty in voting	3.8%	0.6%	0.9%	1.2%	7.2%	1.6%	1.5%	6.3%
"Yes" to any of above	30.1%**	8.4%	26.9%**	44.3%**	43.2%**	31.2%**	21.1%**	39.7%**
Sample size	1040	710	264	197	344	651	562	478

*Difference from nondisability sample is significant at $p < 0.05$; ** $p < 0.01$.

finding or getting to the polling place (5.9 percent), writing on the ballot (4.5 percent), and getting inside the polling place (3.6 percent).

Respondents were asked to describe the difficulties they experienced in their own words, with answers recorded verbatim. Typical answers regarding difficulty finding or getting to the polling place were problems in transportation (e.g., “needed a ride”), problems in basic mobility (e.g., “barely able to walk”), and problems finding the polling place (e.g., “they had relocated to another building and had not put up signs”). Among those reporting difficulty getting inside the polling place, typical responses concerned steps or stairs, or walking distances (e.g., “there was an incline in the parking lot which I had to climb”). Reported problems in understanding how to vote or use the voting equipment mostly concerned the technology (e.g., “unfamiliar with computers”) but some people expressed more general difficulties (e.g., “the place was unorganized and confusing”). Problems in recording the vote included not being able to reach the machine (e.g., “voting machine not made for handicapped people—it is about six feet high”), machine malfunctions (e.g., “screen started rolling”), and difficulty operating the machine (e.g., “trouble pulling final large handle of voting machine”).

Difficulties varied by type or severity of disability. As shown in Table 3, all of the major impairments were linked to greater difficulties in reading or seeing the ballot, and all except hearing impairments were linked to difficulty in understanding how to vote or use the voting equipment. Not surprisingly, people with mobility impairments were the most likely to report difficulty getting inside the polling place, or difficulty waiting in line. Those needing assistance in activities of daily living were the most likely to report voting difficulties (39.7 percent), but the rate for those not needing such assistance (21.1 percent) was also higher than among voters without disabilities.

Probit regressions predicting any voting difficulty in Table 4 show that controlling for demographic and resource variables makes very little difference in the disability gap: people with disabilities remain about 21 percentage points more likely to experience voting difficulties. Results in column 2 show that those with visual impairments, cognitive impairments, and difficulty going outside alone are the most likely to experience difficulties in voting. When this is probed with additional characteristics in column 3, those who are totally deaf and those whose activities are limited “some” or “a lot” are also more likely to experience difficulties. Not surprisingly, those who report they have a vehicle that they can drive are less likely to report voting difficulties, reflecting the problems faced by those who must rely on others or on public transportation in order to get to a polling place. While it might be expected that those with more recent disability onset would have more difficulties as they are learning how to cope with their new condition, the time since onset is not a significant predictor of voting difficulty. Those using a cane or crutches are less likely than others with disabilities to experience voting difficulty, which probably indicates that relatively mild mobility limitations do not pose substantial accessibility problems in polling places.

For a summary measure of their voting experiences, respondents were asked: “Overall, how easy or difficult was your experience in voting at the polling place?” Close to three-fourths (76.0 percent) of voters with disabilities said it was very easy, which is lower than among voters without disabilities (86.4 percent). The difference is mostly accounted for by a higher likelihood that voters with disabilities said the experience was “somewhat easy” (17.6 percent compared to 11.2 percent), but they were also more likely than those without disabilities to say it was somewhat or very difficult (5.8 percent compared to 1.7 percent). While the 5.8 and 1.7 percent figures may seem small, given the size of the populations these represent about 1.5 million people with disabilities and 1.5 million people without

TABLE 4
Predicting Voting Difficulties

	(1)	(2)	(3)
Disability	0.208***	(6.741)	
Disability types and characteristics			
Hearing impairment		-0.016 (-0.430)	-0.022 (-0.603)
Visual impairment		0.097* (1.848)	0.047 (1.048)
Cognitive impairment		0.115*** (3.063)	0.042 (1.289)
Mobility impairment		0.025 (0.894)	0.0052 (0.141)
Self-care limitation		0.044 (0.818)	0.076 (1.535)
Limited going outdoors		0.116** (2.571)	0.024 (0.652)
Other activity limitation		0.018 (0.398)	-0.064* (-1.687)
Totally deaf			0.412* (1.917)
Totally blind			0.081 (0.832)
Use wheelchair			-0.011 (-0.237)
Use cane or crutches			-0.056** (-2.130)
Difficulty reaching or grasping			-0.010 (-0.374)
Activities limited hardly at all			0.093 (1.209)
Activities limited a little			0.115* (1.678)
Activities limited some			0.233*** (3.098)
Activities limited a lot			0.194*** (2.586)
Can drive own vehicle			-0.149*** (-3.389)
Years since onset			-0.001 (-0.646)
Resources			
HS diploma	-0.038 (-0.991)	-0.021 (-0.516)	-0.002 (-0.045)
Some college	-0.009 (-0.213)	0.015 (0.346)	0.048 (1.028)
Associate's degree	0.003 (0.072)	0.016 (0.318)	0.044 (0.792)
Bachelor's degree	-0.0126 (-0.296)	0.008 (0.173)	0.039 (0.815)
Graduate degree	0.007 (0.154)	0.030 (0.624)	0.068 (1.282)
Demographics			
Female	-0.032 (-1.461)	-0.033 (-1.554)	-0.045** (-2.193)
African American	0.111*** (2.721)	0.092** (2.256)	0.092** (2.291)
Other race	0.039 (0.722)	0.040 (0.771)	0.027 (0.576)
Hispanic	-0.001 (-0.014)	0.006 (0.160)	0.013 (0.342)
Age 30-49	-0.007 (-0.173)	-0.007 (-0.177)	0.007 (0.174)
Age 50-64	-0.020 (-0.512)	-0.017 (-0.450)	-0.007 (-0.177)
Age 65+	-0.052 (-1.432)	-0.032 (-0.845)	-0.031 (-0.836)
Married, spouse present	-0.004 (-0.161)	-0.10 (-0.405)	0.009 (0.415)
Observations	2,049	2,036	1,952

NOTE: Dep. var. = difficulty in voting at polling place in 2012. Coefficients represent marginal effects from probit regressions. Robust z-statistics in parentheses.
*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

disabilities, or 3 million people total, which is enough to affect many election outcomes if these people decide not to vote.

There is positive news, however, from voter reports of how they were treated by election officials. Among those who said they needed some assistance in voting (29.5 and 10.7 percent of voters with and without disabilities, respectively), close to nine-tenths of each group, reported that the election officials were “very helpful” (92.6 and 87.4 percent), and the large majority of each group said they were treated very respectfully (86.8 and 84.7 percent).

TABLE 5
Effects of Voting Difficulties on Psychological Variables

Dep. Var.	(1) Internal Efficacy	(2) External Efficacy	(3) People w/disabs. have Influence	(4) Govt. Officials Treat People w/Disabs. w/Respect
Any difficulty in voting	-0.328 (-1.360)	-0.248 (-0.877)	-0.312** (-2.185)	-0.501*** (-3.508)
Disability	-0.016 (-0.087)	-0.241 (-1.038)	-0.121 (-1.014)	-0.263** (-2.018)
Resources				
HS diploma	0.266 (0.763)	-0.331 (-0.833)	-0.471** (-2.530)	-0.149 (-0.655)
Some college	1.181*** (3.285)	0.186 (0.466)	-0.361** (-1.994)	-0.256 (-1.150)
Associate's degree	1.434*** (3.555)	0.177 (0.401)	-0.372* (-1.653)	-0.140 (-0.594)
Bachelor's degree	1.720*** (4.836)	0.374 (0.917)	-0.511*** (-2.684)	-0.277 (-1.201)
Graduate degree	1.880*** (5.260)	0.553 (1.322)	-0.602*** (-3.144)	-0.255 (-1.101)
HH income (13 dummies)	Yes	Yes	Yes	Yes
Demographics				
Female	-0.531*** (-3.553)	-0.095 (-0.540)	-0.139 (-1.461)	-0.257*** (-2.587)
African American	0.383 (1.503)	0.032 (0.106)	-0.034 (-0.207)	-0.258 (-1.389)
Other race	0.021 (0.072)	0.395 (1.078)	-0.268 (-1.177)	-0.078 (-0.394)
Hispanic	0.239 (0.862)	0.771** (2.234)	-0.193 (-1.144)	-0.143 (-0.758)
Age 30-49	0.094 (0.324)	-0.152 (-0.463)	0.474*** (2.595)	-0.071 (-0.418)
Age 50-64	0.248 (0.892)	-0.256 (-0.801)	0.218 (1.204)	-0.186 (-1.120)
Age 65+	0.046 (0.165)	-0.455 (-1.408)	0.284 (1.591)	0.217 (1.270)
Married, spouse present	-0.038 (-0.208)	0.041 (0.217)	-0.042 (-0.395)	-0.056 (-0.522)
Constant	5.235*** (8.026)	5.989*** (10.10)	4.082*** (12.74)	4.112*** (11.71)
Observations	2,216	2,187	2,177	2,148
R ²	0.155	0.080	0.061	0.082

NOTE: Robust z-statistics in parentheses.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Voting Difficulties and Feelings of Efficacy

Voting difficulties may affect not only the ability to vote but also psychological variables related to the political process. In Table 5, we use voting difficulty in OLS regressions to predict our four psychological variables, controlling for demographic and resource variables. There is no significant relationship between voting difficulties and either internal or external efficacy, although it must be kept in mind that this sample is restricted to people who voted in 2012 and as such may be select in a way that suppresses the relationship (e.g., those who voted despite experiencing difficulties may have higher efficacy levels and be especially committed to voting).

The negative relationship between voting difficulties and the group efficacy measure of perceived influence of people with disabilities in politics is noteworthy because this latter variable is a strong predictor of voting among people with disabilities in general, as shown in Table 2. If voting difficulties decrease the perceived impact that people with disabilities can have on political outcomes and public affairs, they may be discouraged from voting, consistent with the idea that inaccessible polling places send negative messages that reduce political participation (Schneider and Ingram, 1993).

Voting by Mail

Polling place difficulties may be avoided by voting by mail. Among voters, over one-fourth of people with disabilities (28.1 percent) voted by mail compared to one-sixth (17.3 percent) of people without disabilities, based on data from the VRS. Voting by mail was high among people with each of the impairments, and especially high among those with difficulty dressing or bathing (39.6 percent), or difficulty going outside alone (36.0 percent).

A separate analysis of the 2008 and 2010 Census Bureau data also revealed that voters with disabilities were more likely than those without disabilities to vote by mail (Schur and Kruse, 2014). A striking finding is that relative voter turnout was especially high among people with disabilities in jurisdictions in which (a) everyone voted by mail (in Washington and Oregon), (b) “no-excuse” mail ballots were available, so that citizens did not have to report having a disability in order to be given a mail ballot, and (c) “no-excuse” ballots were available on a permanent basis, not requiring people to renew their request each election. Many people with significant impairments do not self-identify as having a disability, and those who do may be reluctant to report it on a public form.⁴ People with disabilities were least likely to vote in the states where they had to report a disability for every election in which they wanted a mail ballot.⁵

Using mail-in ballots clearly does not eliminate all voting difficulties. The DVS data show that among people who voted by mail in 2012, 13.4 percent of voters with disabilities had difficulty reading or filling out the mail-in ballot, and 11.3 percent needed assistance, both significantly higher than for mail voters without disabilities (2.2 and 0.4 percent, respectively). Most of the reported problems with mail ballots concerned the ability to read them (e.g., “can not read small print because of vision problems,” “had to use a magnifier”). Some respondents reported difficulty in understanding the written material (e.g., “I could not understand some of the propositions,” “too complicated”) or physical difficulties such as “checking off the squares on the ballot” and “I have a hand tremor from a previous surgery and it was difficult to mark the ballot easily.” These data illustrate some of the concerns about mail voting described by Tokaji and Colker (2007).

Expected Difficulties in Voting Among Nonvoters

So far the focus has been on the experiences of voters. Among people who did not vote at a polling place in 2012 but had done so in the past 10 years, the results are very similar

⁴Among people reporting vision, hearing, cognitive, or mobility impairments (using questions similar to the current Census questions), only 58 percent said that they considered themselves to have disabilities (Schur et al., 2002).

⁵There are currently 20 states that require an excuse for a mail ballot, as reported on http://www.ncsl.org/research/elections-and-campaigns/absentee-and-early-voting.aspx#no_excuse, accessed January 2, 2017.

to the pattern found among 2012 voters: 28.6 percent of those with disabilities reported some type of difficulty in voting, compared to 10.2 percent of voters without disabilities. While this indicates little change in the voting difficulties over the past 10 years, the two groups may be different in other ways that affect the reporting of voting difficulties.

Those who had not voted in a polling place in the past 10 years, either because they voted by mail or did not vote, were asked a hypothetical question about whether they would expect to face any difficulties if they wanted to vote in a polling place. Two-fifths (40.1 percent) of people with disabilities in this group said they would expect some type of difficulty, compared to 1.2 percent of people without disabilities. It is clearly possible that these reports are upwardly biased. People who have not voted at a polling place may be more likely to cite polling place difficulties as a way to justify their decision. Based on actual reported difficulties from otherwise similar people who voted, almost one-third (31.6 percent) of the nonvoters answering the hypothetical question would be predicted to experience voting difficulties if they tried to vote, which is very close to the overall figure among people who actually voted in a polling place.⁶ Therefore, while the high rate of hypothetical difficulties may reflect some upward bias, the majority of these reports appear to reflect realistic expectations of polling place difficulties, and the overall level of actual difficulties would be at least as high if these citizens were to decide to vote in polling places.

Preferences for How to Vote

There has been increasing public debate over how voter turnout may be affected by increased availability of alternative methods such as voting by mail or on the Internet. To assess voting method preferences, all respondents—whether they voted or not in 2012—were asked: “If you wanted to vote in the next election, how would you *prefer* to cast your vote?” The majority of people both with and without disabilities (58.0 and 67.7 percent, respectively) said they would prefer to vote in person in a polling place. One-fourth (25.0 percent) of people with disabilities said they would prefer to vote by mail, compared to about half that number (13.6 percent) among people without disabilities—both figures are just slightly less than the percent who voted by mail in 2012. People with disabilities were also more likely to prefer voting by telephone (5.0 percent compared to 1.5 percent), and less likely to prefer voting on the Internet (9.6 percent compared to 16.1 percent). This latter result probably reflects the lower rates of computer use and Internet access among people with disabilities.⁷

Conclusion

The disability gap in voter turnout continued in 2012, and this gap is not fully explained by standard predictors of turnout. Inaccessible polling places appear to contribute to this gap. We present new data showing that almost one-third of voters with disabilities reported difficulty in voting at a polling place in 2012, compared to only 8 percent of voters without disabilities.

⁶This estimate was based on imputed probabilities from a probit regression for those who had voted at a polling place in the past 10 years. The regression predicted any voting difficulty with disability types, severity, and demographic characteristics, and the coefficients were used to impute the likelihood of voting difficulty for those who answered the hypothetical question.

⁷Only 63.8 percent of people with disabilities live in homes with Internet access compared to 81.1 percent of people without disabilities (File and Ryan, 2014).

Experiencing difficulties in voting does not predict lower levels of internal or external political efficacy, but does predict a lower perception of the influence of people with disabilities in the political system. This group efficacy measure, in turn, is a strong predictor of turnout among people with disabilities. While we cannot draw strong conclusions about causality from cross-sectional data, this is consistent with the ideas of Schneider and Ingram (1993) regarding the potential importance of messages conveyed by public policies that shape perceptions of the political system. These findings support the idea that voting difficulties decrease voter turnout of people with disabilities by decreasing their perceived political influence.

While increasing the ease of voting by mail holds promise, it does not appear to be a sufficient solution since most people with disabilities prefer to vote at polling places. In addition, voting by mail does not solve accessibility problems, given that more than one-tenth of mail voters with disabilities reported difficulty and the need for assistance in completing and sending a mail ballot. Those who need assistance may have difficulty maintaining the confidentiality of their vote, and may have more privacy in polling places equipped with appropriate voting technologies.

The findings have implications for both political science research and policy. The impact of voting difficulties on turnout—both directly and indirectly through perceptions of the political system—are clearly worthy of further research. Ideally, such research can more clearly establish causality by tracking voters to see the effects of voting difficulties over time, or tracking changes in turnout following policy interventions, such as improved polling place accessibility. We hope this study can serve as a baseline for assessing such efforts and general progress in making voting easier and more accessible, as well as examining the relationship between greater accessibility and turnout. More generally, it would be useful to conduct further research on how and why several predictors of voting differ between people with and without disabilities, shedding light on the role of specific voting difficulties versus other social or economic obstacles they face.

On a practical level, there are seven broad categories of policies that hold promise for improving access and turnout among people with disabilities, based on best practices reported both within the United States and internationally (Schur, 2013; IFES, 2014):

1. *Increased accessibility of polling places, voting equipment, and election websites.* Many states have taken steps to monitor accessibility and correct problems (e.g., Rhode Island, Maryland, Georgia, Missouri). Direct involvement of the disability community helps ensure the effectiveness of technologies and practices. For example, people with disabilities can help assess and select potential locations for polling places, and do usability tests of equipment. In Lebanon, the Lebanese Physical Handicap Union worked with the International Foundation for Electoral Systems to identify and correct inaccessible polling locations, and in Armenia a campaign was successful in building ramps for polling stations (IFES, 2014:43).
2. *Election monitoring.* National and international observer groups can partner with disability groups and individuals with disabilities to ensure that observation checklists include access questions and elections meet the international standards of the U.N. Convention on Rights of Persons with Disabilities (IFES, 2014).
3. *Mobile voting.* Bringing ballots or voting equipment to more convenient locations (e.g., where people with disabilities reside) can reach voters who find it hard to get to conventional polling places (e.g., Vermont, Puerto Rico). Some countries use a “mobile ballot box” brought to the person’s home (IFES, 2014).
4. *Training for election officials and poll workers.* A number of states have produced videos, conferences, and programs on accessibility issues, as well as providing accessibility

checklists for poll workers to use on election day (e.g., Connecticut, Ohio, California, Alabama). Similarly, countries such as Guatemala include sections on disability in poll worker manuals.

5. *Outreach and education for people with disabilities.* Several states distribute voting information in accessible formats through videos, audio files, booklets, PSAs, and educational events, often in partnership with disability organizations (e.g., Idaho, Hawaii, West Virginia, New York). An education campaign in South Sudan “resulted in increased mobilization of voters with disabilities” (IFES, 2014:47). The media and political parties can be trained in disseminating campaign information and election results in accessible formats.
6. *Voting by mail.* Evidence shows that “no-excuse” and all-vote-by-mail systems are linked to higher turnout among people with disabilities. However, 20 states still require an excuse when requesting a mail ballot, and some people with impairments will not disclose having a disability to request a mail ballot because they do not self-identify as having a disability (Schur et al. 2002), or are reluctant to disclose a disability on a public form.
7. *Election law.* Individuals with disabilities, particularly those under guardianship, are often prevented from voting or subjected to higher burdens in demonstrating capacity to vote. Eleven states impose no competence requirement or disability-based restriction in voting (an increase from six states in 2000) and these states have higher turnout by voters with cognitive impairments (Mathis, 2013; Sanders, 2015). A number of countries have been reforming voting eligibility laws to conform to international standards in the U.N. Convention (IFES, 2014).

In short, although progress has been made, people with disabilities are still more likely to experience problems in voting, which may affect their perceptions of the political system and their voter turnout. Fortunately, most of the reported problems are not difficult or very expensive to remediate. They generally require simple changes, such as making ballots easier to read, simplifying instructions, communicating clearly the location of polling sites, providing accessible parking close to polling sites, ensuring the polling site is accessible without navigating stairs, providing seats for those who have difficulty standing in line, and making machinery easier to operate. For those who prefer voting by mail, the adoption of no-excuse systems for requesting mail ballots appears to increase their likelihood of voting.

Simple solutions like these can help eliminate barriers that keep many people with disabilities from voting. They can also benefit many nondisabled citizens such as people with temporary impairments or limited literacy skills, or those who need to bring young children to the polling place. Such solutions can work in conjunction with stronger get-out-the-vote campaigns by disability organizations and other efforts to raise turnout through increasing economic and social inclusion of people with disabilities. As the population ages, we can expect more people to experience disabilities. A fully accessible voting process is an essential component of democracy and will help make the political system more responsive and representative of all Americans.

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