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Increasing Equitable Access to Individuals with Disabilities: Participation in Electronic Public Administration Research

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Individuals with disabilities (both physical and cognitive) constitute 15% of the global population and 25% of U.S. citizens. However, public administration has not given explicit thought to how current research methods and other data collection processes or tools might exclude individuals with disabilities. This lack of attention to research methods and instruments might impose barriers and limit access to participation for individuals with disabilities who would otherwise meet the requirements for participation within the research design. This omission undermines social equity, a critical pillar of public administration, by systematically excluding individuals with disabilities from the research process. Equitable research ensures that scholars are not excluding participants from the research *while* obtaining insights from the ‘relevant population.’ Current exclusionary practices raise several questions that are addressed in this essay including: (1) What are the implications of equitable access in electronic research? (2) What are the barriers of access for individuals with disabilities who want to participate in research, like surveys conducted through an electronic delivery system? and (3) What would an equitable data collection and research design look like?

Keywords: Equitable Access, Social Equity, Electronic Research, Disability Policy

Ableism, or the “stereotyping, prejudice, discrimination, and social oppression toward people with disabilities” (Bogart & Dunn, 2019, p. 650), occurs when we, as researchers, are passive or indifferent to barriers for individuals in the disability community that are inadvertently erected in our quest for knowledge. Social equity is a pillar of public administration, making the dismantling of oppressive policies and practices especially relevant to scholars in our field (Frederickson, 1990). Indeed, equity issues in public employment and public service delivery are often examined through the lenses of income, race, ethnicity, and/or gender (e.g., Garrow, 2014; Pedersen et al., 2018; Thielemann & Stewart, 1996; Wilkins & Keiser, 2004).¹ However, as Blessett et al. (2019) note, individuals with disabilities remains an understudied population, both singularly and as an element of intersectionality. The disability community represents one of the largest subpopulations in the United States (Bogart & Dunn, 2019); on a global scale, about 15% (around 1 billion people) of the world’s population are part of the disability community (World Bank, n.d.). Yet, researchers in public administration overlook the experiences of individuals with disabilities by utilizing research designs and methods that inherently exclude the disability community.

Researchers may argue that there are many groups and contexts currently excluded from public administration research. This argument is true—we, as scholars of public

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Table 1. Categories of Disability (Centers for Disease Control & Prevention, 2019)

Category	Definition	Percentage of Americans with Indicated Disability
Cognitive Disability	Difficulty concentrating, remembering, or making decisions (due to a physical, mental, or emotional condition)	12.0%
Hearing Disability	Deaf or serious difficulty hearing	5.9%
Mobility Disability	Serious difficulty walking or climbing stairs	12.8%
Vision Disability	Blind or difficult seeing (even with glasses)	5.0%
Self-Care Disability	Difficulty dressing or bathing	3.8%
Independent Living Disability	Difficulty doing errands alone (due to a physical, mental, or emotional condition)	7.0%

administration, need to generate more diverse, inclusive research. However, we cannot use this argument to exclude an entire subpopulation. Exclusion occurs when we, as researchers, do not believe or recognize that individuals with disabilities are a part of the population we are studying. A common attitude towards individuals with disabilities is found in this sentiment:

The normal understanding would suggest that the purpose [of research] is to generate new, valid knowledge about questions that are relevant for society and science. This would suggest that inclusion of individuals with disabilities should be discussed based on representativeness. If we study CEO in municipalities, there are probably few persons in the population with disabilities while there are more if we study citizens. Making sure that citizen surveys are representative, also in terms of including individuals with disabilities, is probably much more challenging than for surveys of CEO. You cannot be a municipal CEO if you are unable to answer an online survey (personal communication to author, June 2020).

Individuals who are municipal CEOs with a disability may not be able to participate in an online survey *because the survey itself is inaccessible*, not because the individual is incapable. Members of the disability community should be afforded *equal opportunities to participate in research*. Instead, they face barriers to participation in research due to researchers' passiveness or beliefs that members of this community are not capable. This essay serves as a starting place for scholars who seriously desire to address inequitable disparities of access in research by first reviewing access issues for individuals with disabilities in research and then identifying potential accessible solutions.

Understanding Access Issues for Individuals with Disabilities

Within the disability community, individuals often separate themselves into three categories: visible disability (i.e., an individual's disability can be easily identified by another person), invisible disability (i.e., another person cannot easily identify an individual's disability), or a combination of disabilities (a mixture of invisible and visible disabilities) (Santuzzi et al., 2014). Table 1 provides further definitions about the types of disabilities that an individual can experience—each category contains individuals with visible and invisible disabilities.²

Current research methods training does not adequately address how to practice and develop inclusive data collections and research designs (McCandless & Larson, 2018). In order to

address this gap, I share several scenarios demonstrating how electronic research designs and data collection processes create limited access for individuals with disabilities.

- An electronic survey contains images for participants to evaluate. The study relies on the use of images for legitimate reasons, such as presenting performance information as a scorecard (e.g., Funk, 2019). However, unless images are specifically coded for a screen reader, a participant with a vision disability will not be able to access the image's content. Unable to continue forward, the participant either skips the section, provides invalid responses, or abandons participation.
- Scholars may utilize audio and video materials, as well as in-person presentations, to deliver treatments in experimental research (e.g., Jakobsen, 2013). However, individuals with hearing and visual disabilities might not be able to access material-based interventions if researchers do not provide a transcript, closed captioning, or sign language interpretation.
- Research relying on physical responses, or the physical manipulation of materials, might create barriers. For instance, scholars commonly use Implicit Association Tests to measure bias, which relies on a physical response (e.g., clicking a key) in reaction to a visual cue (e.g., Marvel and Resh, 2019). However, subjects with a mobility disability may have difficulty completing such tasks if assistive technology is not provided to complete the required manipulation.
- Interested in the effects of natural disasters on voting, scholars decide to survey citizens in a recovering community (e.g., Robinson et al., 2019). However, in the design of the project, researchers fail to account for various forms of trauma. As a result, individuals with a cognitive disability, like PTSD, participate in a survey that contains multiple unforeseen triggers creating additional psychological pain.
- Scholars commonly use names to prime race and gender in experimental vignettes (e.g., Jilke et al., 2018). Such experiments may ask respondents to recall the race or gender as a means of demonstrating the efficacy of the experimental treatment. However, an individual with a cognitive disability may struggle to recall specific details. Unable to recall answers can add to social anxiety, leading the individual to struggle to complete the rest of the survey, which, as a result, decreases their self-efficacy.
- Finally, as noted in literature on accessible research, survey questions that lack concrete references or are quite long cause problems for individuals with a cognitive disability that presents as a learning disability (e.g., dyslexia) (Wilson et al., 2013). Such individuals struggle to understand the question rendering any responses incomplete or inaccurate.

Developing Equitable Access in Electronic Research

Exclusion in research occurs when researchers design and execute projects that are inaccessible to a particular population or group nested within the population of interest (Rios et al., 2016). While traditional research can be exclusionary and inaccessible (e.g., the research lab is too narrow for wheelchairs or the consent form is only available in a paper copy), this essay focuses on the exclusion that occurs when researchers use electronic platforms and techniques. Such electronic techniques are becoming more common as scholars are increasingly relying on online participant pools and delivering surveys and experiments through electronic mediums (e.g., Stritch et al., 2017; Thomsen & Jensen, 2020) even while relying on physical tasks or responses to visual images (e.g., Marvel, 2016).

Electronic research designs are inaccessible because researchers have not learned how to operate outside of traditional approaches to research design and data collection (McCandless & Larson, 2018). Consider the analogy of the two-way radio. The person initiating communication does so with two purposes: (1) sharing knowledge, and (2) gaining knowledge. However, if the radio is not tuned to the proper bandwidth, the person initiating communication will not be able to accomplish their goal of sharing and gaining knowledge.

Furthermore, if the person seeking to gain and share knowledge only sticks to the originally programmed channel provided by the manufacturers, they may not be able to connect with a wider audience who can confirm knowledge and share new information. Currently, our electronic research designs and platforms operate only through the manufacturer's channel. We are missing those communities who fall just outside the predetermined bandwidth, merely because the technology and design of electronic research is inherently inaccessible to the radio broadcast—not because the population is unwilling or incapable of participating. This inaccessibility applies not only to surveys of general populations, but to smaller, more specialized surveys of subpopulations like students, front-line workers, and even municipal CEOs. While the statistical impact of ensuring accessible electronic research might be minimal, public administration researchers have a responsibility to create inclusive research as part of our efforts to create a more inclusive and equitable society (Starke et al., 2018; Svara & Brunet, 2020).

The need to be sensitive and responsive to accessibility throughout the process of electronic-based research is critical—barriers may exist as individuals with disabilities access the survey, share responses, and provide feedback to researchers. One might wonder how to balance providing equitable access, or the reduction of barriers to participation in electronic research, for individuals with disabilities with the limitations of time, funding, and lack of knowledge around access issues. Shifting our mindset towards more opportunities for equitable research access for individuals with disabilities, regardless of limitations, will be challenging, but must be addressed.

Equitable access can take many forms, due to the nature of the interventions or the population being studied. Ultimately, it is the responsibility of scholars to increase access through research design and data collection processes. As Svara & Brunet (2020) point out, social equity is a pillar of our field and researchers should seek to promote the values associated with equity, including fairness and justice. Individuals with disabilities should be included in our research, through conscious designs that integrate accessible technologies with research practices, as it is the ability to access the research, not the individual's capacity, which limits potential participation. There are many issues that constrain our choices as researchers outside of accessibility. All choices about research depend on the capacity of the scholar and the scope, propositions, and financial limitations of the project. These costs become more nontrivial when thinking about equitable access in electronic research.

Due to current technological limitations, not all accessibility barriers can be overcome. Researchers lack a globally accessible electronic platform to develop various forms of electronic research. Surveys created on common survey administration platforms are, by default, not accessible with users trying to navigate the survey often facing barriers like hidden screen elements or improper use of headings (Nikivincze & Ancis, 2018).³ Many of the default settings and basic templates and question forms found on electronic survey platforms are not accessible, requiring users to exert additional effort create accessible surveys. The combination of increased expenses, demands on time, and lack of easy solutions creates a formidable challenge. Making this process seemingly more untenable is the nature of inferential statistics, and the fact that any effort to increase accessibility of a very small group might not change the results of the study.

However, as scholars in a field guided by social equity concerns, we need to consider this issue of equitable access and be aware of who is, and is not, included in our research (Blessett et al., 2019; Sabharwal et al., 2018). The best solutions to establish, expand, and maintain equitable access will not inherently change the design of the intervention or the research itself; instead, these solutions *merely alter the access to the research*. It is imperative that scholars ensure design restraints are not used as justification to exclude individuals with disabilities from our studies.

Potential Solutions to Developing Equitable Access

The development and practice of equitable access in electronic research requires the investment of a scholar's time and financial resources. While the intention of this essay is to initiate a dialogue on the issue of equitable access, there are a number of simple tactics that scholars can adopt to enhance access within their work. By offering a few practical suggestions, I hope to initiate a discussion in the field.

First, scholars can start seeking solutions by identifying who is excluded through their current research process. As is the case with most work focused on creating equitable access, a large amount of time must be invested within the design phase with equity pauses throughout the process (see Nasser et al., 2013) to determine if (a) the project is truly reflective of the population, and (b) the process provides an accessible arena. Researchers can ask the following questions when developing their research to ensure an equity mindset:

- Is this project reflective of the population?
- Are there processes that provide accessible spaces for participants in the project and with the technology?
- Do the accessible solutions implemented inherently change the research itself? Is there more that can be done?
- How will the analysis address accessibility if solutions could not be implemented per the standard of reasonableness?
- When the work is shared, will it be accessible?

As part of this larger reflection on equity in research, researchers should create space in their research for individuals to raise accessibility and inclusion issues involving visible and invisible disabilities. Most researchers work in an organization with a professional human resources office or, in the case of universities, a disability resource and access center. These offices can serve as a gateway to identifying the common challenges, technology, and best practices in creating accessible research. Alternatively, a peer, who openly identifies with their disability, may be willing to share their perspective and other expertise from their lived experience, but researchers should be cautious not to place the responsibility of accessibility on their peers or professional resources. These resources serve an educational purpose, specific to the scholar's research, to assist in identifying the equitable access barriers that exist and the feasibility of potential solutions.

Removing Specific Barriers for Individuals with Disabilities

Many solutions to visible disabilities are easier to generate, monitor, and implement, since technologies and accessibility options already exist. When addressing access for individuals with visible disabilities, scholars might consider utilizing specific research tools and techniques that create accommodations related to vision, hearing, and movement. For example, when using audio or visual clips, researchers should provide a transcript of the audio for individuals with a hearing or vision disability (Power & Jürgensen, 2010). If data collection relies on a large amount of text, scholars should use software, like a screen reader, to check for accessibility barriers. Researchers should be innovative in providing ways for participants to indicate the need for additional time, utilizing headings in a survey to guide a screen-reader or allowing participants to record their answers through an audio or video platform (Dorigo et al., 2011). While no online platform universally addresses the various accessibility needs of individuals with disabilities, scholars can utilize evaluations, like WAVE from WebAim, to see where their platform of choice succeeds, and fails, in adhering to internationally recognized Web Accessibility guidelines (Centeno et al., 2006; Gottliebson et al., 2010).

Researchers may have a harder time anticipating accessibility barriers for individuals with invisible disabilities, who may struggle with communication barriers, temporal order

comprehension, anxiety about survey participation, task-frustration, and/or fatigue (Nicolaidis et al., 2020). Each of these challenges requires careful attention to the design, format, and structure of electronic research. One straightforward method is to incorporate both qualitative and quantitative questions within an instrument—a mixed methods approach allows individuals who may struggle understanding a scale to provide insights into their experiences (Kroll, 2011). Scholars could reach out to individuals with invisible disabilities to test questions prior to implementation in order to identify potential problems (Wilson et al., 2013). Additional accessible solutions include using simpler sentence structures, providing opportunities to pause and come back to the survey/experiment, or utilizing visual scales (Dorigo et al., 2011; Nicolaidis et al., 2020). Scholars can also create accessible data collection tools by using audio alternatives, in partnership with text-based instruments, ensuring large-print text is available, and selecting strongly contrasting colors (Todis et al., 2005; Wilson et al., 2013).

Conclusion

If we truly believe in social equity as a core principle of public administration research, we have a responsibility to provide accessible material so that individuals with disabilities can participate fully in the research process. When carefully considered, virtual participation in research may allow for the participation and inclusion of individuals excluded by traditional methods. Scholars should be willing to consult with experts on equitable access during their research design and utilize techniques to prevent the creation of additional barriers to participation. The effort required to develop equitable and accessible research should never be used as justification for exclusion. When we inadvertently exclude individuals, what is the implication for our research? Is it possible that, by failing to consider individuals with disabilities within our research, we are placing limits on external validity?

Scholars cannot consider every possible contingency but taking the time to develop an equity perspective in research leads to an equity mindset. Taking small, actionable steps moves us towards a more inclusive research practice. However, that very action does not call for true inclusion, as equity does not equal inclusion. In the long term, the process of research needs to be adapted, in order to establish equitable access in electronic research for individuals with disabilities. Scholars should be reflective in ensuring that the tools and technology used to provide access are functional in practice. If the scholar finds that they are unable to overcome the barriers of equitable access, they should be willing to share these challenges and any potentially excluded subpopulations as part of their findings.

Scholars serious about social equity provide space *within* their research to consult with individuals with disabilities to create accessible research design and processes. Equitable access ensures that research designs are providing true access, not creating additional barriers or new levels of distrust through unintentional harm. Researchers are encouraged to examine their current and past research to determine how to improve. When scholars create the time and space to provide equitable access in electronic research, a more accurate understanding of the world will emerge.

Notes

1. The intersection of disability is an important area of study as individuals with disabilities are more likely to be impoverished, elderly, female, and/or from communities of color (Cigler, 2007; Fuller-Thomson et al., 2009; Mendes de Leon et al., 2005; Rios et al., 2016; Warner & Brown, 2011).
2. Individuals with invisible disabilities make up the largest part of the disability community (Centers for Disease Control and Prevention, 2017). Within these categories of disabilities,

a range of physical and cognitive function exists, from low levels to moderate or severe levels of disability, which may place them in the category of vulnerable populations presenting researchers with the obligation to avoid manipulation or coercion. Institutional Review Board (IRB) and other informed consent guidelines might prohibit the participation of members of vulnerable groups (e.g., those who cannot give informed consent).

3. While survey platforms may provide help guides or accessibility checkers, these tools focus mostly on increasing access for individuals with a vision disability.

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References

- Blessett, B., Dodge, J., Edmond, B., Goerdel, H., Gooden, S., Headley, A., Riccucci, N., & Williams, B. (2019). Social equity in public administration: A call to action. *Perspectives on Public Management and Governance*, 2(4), 283-299. <https://doi.org/10.1093/ppmgov/gvz016>
- Bogart, K., & Dunn, D. (2019). Ableism special issue introduction. *Journal of Social Issues*, 75(3), 650-664. <https://doi.org/10.1111/josi.12354>
- Centeno, V., Kloos, C., Fisteus, J., & Álvarez, L. (2006). Web accessibility evaluation tools: A survey and some improvements. *Electronic Notes in Theoretical Computer Science*, 157(2), 87-100. <https://doi.org/10.1016/j.entcs.2005.12.048>
- Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Human Development and Disability. (2019). *Disability and Health Data System (DHDS) Data [online]*. [accessed Nov 23, 2021]. <https://dhds.cdc.gov>
- Cigler, B. (2007). The 'big questions' of Katrina and the 2005 great flood of New Orleans. *Public Administration Review*, 67(S1), 64-76. <https://doi.org/10.1111/j.1540-6210.2007.00814.x>
- Dorigo, M., Harriehausen-Mühlbauer, B., Stengel, I., & Dowland, P. (2011). Survey: Improving document accessibility from the blind and visually impaired user's point of view. In C. Stephanidis (Ed.), *Universal access in human-computer interaction: Applications and services* (pp. 129-135). Springer. https://doi.org/10.1007/978-3-642-21657-2_14
- Frederickson, H. (1990). Public administration and social equity. *Public Administration Review*, 50(2), 228-237. <https://doi.org/10.2307/976870>
- Fuller-Thomson, E., Nuru-Jeter, A., Minkler, M., & Guralnik, J. (2009). Black-white disparities in disability among older Americans: Further untangling the role of race and socioeconomic status. *Journal of Aging and Health*, 21(5), 677-698. <https://doi.org/10.1177/0898264309338296>
- Funk, K. (2019). If the shoe fits: Gender role congruity and evaluations of public managers. *Journal of Behavioral Public Administration*, 2(1), 1-10. <https://doi.org/10.30636/jbpa.21.48>
- Garrow, E. (2014). Does race matter in government funding of nonprofit human service organizations? The interaction of neighborhood poverty and race. *Journal of Public Administration Research and Theory*, 24(2), 381-340. <https://doi.org/10.1093/jopart/mus061>
- Gottliebson, D., Layton, N., & Wilson, E. (2010). Comparative effectiveness report: Online survey tools. *Disability and Rehabilitation: Assistive Technology*, 5(6), 401-410. <https://doi.org/10.3109/17483101003793404>

- Jakobsen, M. (2013). Can government initiatives increase citizen coproduction? Results of a randomized field experiment. *Journal of Public Administration Research and Theory*, 23(1), 27-54. <https://doi.org/10.1093/jopart/mus036>
- Jilke, S., Van Dooren, W., & Rys, S. (2018). Discrimination and administrative burden in public service markets: Does a public-private difference exist? *Journal of Public Administration Research and Theory*, 28(3), 423-439. <https://doi.org/10.1093/jopart/muy009>
- Kroll, T. (2011). Designing mixed methods studies in health-related research with people with disabilities. *International Journal of Multiple Research Approaches*, 5(1), 64-75. <https://doi.org/10.5172/mra.2011.5.1.64>
- Marvel, J. (2016). Unconscious bias in citizens' evaluations of public sector performance. *Journal of Public Administration Research and Theory*, 26(1), 143-158. <https://doi.org/10.1093/jopart/muu053>
- Marvel, J., & Resh, W. (2019). An unconscious drive to help others? Using the implicit association test to measure prosocial motivation. *International Public Management Journal*, 22(1), 29-70. <https://doi.org/10.1080/10967494.2018.1471013>
- McCandless, S., & Larson, S. J. (2018). Prioritizing social equity in MPA curricula: A cross-program analysis and a case study. *Journal of Public Affairs Education*, 24(3), 361-379. <https://doi.org/10.1080/15236803.2018.1426429>
- Mendes de Leon, C., Barnes, L., Bienias, J., Skarupski, K., & Evans, D. (2005). Racial disparities in disability: Recent evidence from self-reported and performance-based disability measures in a population-based study of older adults. *Journal of Gerontology: Social Sciences*, 60B(5), S263-S271. <https://doi.org/10.1093/geronb/60.5.S263>
- Nasser, M., Ueffing, E., Welch, V., & Tugwell, P. (2013). An equity lens can ensure an equity-oriented approach to agenda setting and priority setting of Cochrane Reviews. *Journal of Clinical Epidemiology*, 66(5), 511-521. <https://doi.org/10.1016/j.jclinepi.2012.11.013>
- Nicolaidis, C., Raymaker, D., McDonald, K., Lund, E., Leotti, S., Kapp, S., Katz, M., Beers, L., Kripke, C., Maslak, J., Hunter, M., & Zhen, K. (2020). Creating accessible survey instruments for use with autistic adults and people with intellectual disability: Lessons learned and recommendations. *Autism in Adulthood*, 2(1), 61-76. <https://doi.org/10.1089/aut.2019.0074>
- Nikivincze, I., & Ancis, J. (2018). *Accessible but not usable: Improving practices for surveying people with disabilities* [Paper presentation]. RESNA Annual Conference, Crystal City, Washington DC, United States.
- Pedersen, M., Stritch, J., & Thuesen, F. (2018). Punishment on the frontlines of public service delivery: Client ethnicity and caseworker sanctioning decisions in a Scandinavian welfare state. *Journal of Public Administration Research and Theory*, 28(3), 339-354. <https://doi.org/10.1093/jopart/muy018>
- Power, C., & Jürgensen, H. (2010). Accessible presentation of information for people with visual disabilities. *Universal Access in the Information Society*, 9, 97-119. <https://doi.org/10.1007/s10209-009-0164-1>
- Rios, D., Magasi, S., Novak, C., & Harniss, M. (2016). Conducting accessible research: Including people with disabilities in public health, epidemiological, and outcomes studies. *American Journal of Public Health*, 106(12), 2137-2144. <https://doi.org/10.2105/AJPH.2016.303448>
- Robinson, S., Pudlo, J., & Wehde, W. (2019). The new ecology of tornado warning information: A natural experiment assessing threat intensity and citizen-to-citizen information sharing. *Public Administration Review*, 79(6), 905-916. <https://doi.org/10.1111/puar.13030>
- Sabharwal, M., Levine, H., & D'Agostino, M. (2018). A conceptual content analysis of 75 years of diversity research in public administration. *Review of Public Personnel Administration*, 38(2), 248-267. <https://doi.org/10.1177/0734371X16671368>

- Santuzzi, A., Waltz, P., Finkelstein, L., & Rupp, D. (2014). Invisible disabilities: Unique challenges for employees and organizations. *Industrial and Organizational Psychology*, 7(2), 204-219. <https://doi.org/10.1111/iops.12134>
- Starke, A. M., Heckler, N., & Mackey, J. (2018). Administrative racism: Public administration education and race. *Journal of Public Affairs Education*, 24(4), 469-489. <https://doi.org/10.1080/15236803.2018.1426428>
- Stritch, J., Pedersen, M., & Taggart, G. (2017). The opportunities and limitations of using mechanical turk (MTURK) in public administration and management scholarship. *International Public Management Journal*, 20(3), 489-511. <https://doi.org/10.1080/10967494.2016.1276493>
- Svara, J., & Brunet, J. (2020). The importance of social equity to prevent a hollow public administration. *American Review of Public Administration*, 50(4), 352-357. <https://doi.org/10.1177/0275074020910509>
- Thielemann, G., & Stewart, Jr., J. (1996). A demand-side perspective on the importance of representative bureaucracy: AIDS, ethnicity, gender, and sexual orientation. *Public Administration Review*, 56(2), 168-173. <https://doi.org/10.2307/977204>
- Thomsen, M., & Jensen, U. (2020). Service professionals' response to volunteer involvement in service production. *Journal of Public Administration Research and Theory*, 30(2), 220-239. <https://doi.org/10.1093/jopart/muz028>
- Todis, B., Sohlberg, M., Hood, D., & Fickas, S. (2005). Making electronic mail accessible: Perspectives of people with acquired cognitive impairments, caregivers and professionals. *Brain Injury*, 19(6), 389-401. <https://doi.org/10.1080/02699050400003957>
- Warner, D., & Brown, T. (2011). Understanding how race/ethnicity and gender define age-trajectories of disability: An intersectionality approach. *Social Science & Medicine*, 72(8), 1236-1248. <https://doi.org/10.1016/j.socscimed.2011.02.034>
- Wilkins, V., & Keiser, L. (2004). Linking passive and active representation by gender: The case of child support agencies. *Journal of Public Administration Research and Theory*, 16(1), 87-102. <https://doi.org/10.1093/jopart/mui023>
- Wilson, E., Campain, R., Moore, M., Hagiliassis, N., McGillivray, J., Gottliebson, D., Bink, M., Caldwell, M., Cummins, B., & Graffam, J. (2013). An accessible survey method: Increasing the participation of people with a disability in large sample social research. *Telecommunications Journal of Australia*, 63(2), 24.1-24.13. <https://doi.org/10.7790/tja.v63i2.411>
- World Bank (n.d.). *Disability Inclusion Overview*. <https://www.worldbank.org/en/topic/disability>

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