

**FACTORS IN STUDYING  
EMPLOYMENT FOR PERSONS  
WITH DISABILITY: HOW THE  
PICTURE CAN CHANGE**

# RESEARCH IN SOCIAL SCIENCE AND DISABILITY

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RESEARCH IN SOCIAL SCIENCE AND DISABILITY  
VOLUME 10

**FACTORS IN STUDYING  
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DISABILITY: HOW THE  
PICTURE CAN CHANGE**

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# CONTENTS

INTRODUCTION: EMPLOYMENT AND PERSONS WITH DISABILITIES	vii
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## **PART 1 RELATIONSHIP OF GENDER AND OTHER SOCIODEMOGRAPHICS TO WORK ROLE**

CHAPTER 1 EMPLOYMENT OUTCOMES AMONG MEN AND WOMEN WITH DISABILITIES: HOW THE INTERSECTION OF GENDER AND DISABILITY STATUS SHAPES LABOR MARKET INEQUALITY <i>David Pettinicchio and Michelle Maroto</i>	3
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CHAPTER 2 WHO GOT EARNED INCOME? HEALTH AND OTHER BARRIERS TO EMPLOYMENT FOR YOUNG MILLENNIALS IN HUD-ASSISTED AND OTHER RENTAL HOUSING <i>Barbara A. Haley and Aref N. Dajani</i>	35
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CHAPTER 3 TO WHAT EXTENT DOES DISABILITY DISCOURAGE FROM GOING ON THE JOB MARKET? EVIDENCE FROM ITALY <i>Tindara Addabbo, Jaya Krishnakumar and Elena Sarti</i>	79
--	----

## **PART 2 DISABILITY INCLUSION STRATEGIES AND INTERVENTIONS**

CHAPTER 4 THE COMPLEXITY OF DISABILITY INCLUSION IN THE WORKPLACE: A SOUTH AFRICAN STUDY <i>Nceba Ndzwayiba and Lieketseng Ned</i>	127
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CHAPTER 5 MODEL OF SUCCESSFUL CORPORATE CULTURE CHANGE INTEGRATING EMPLOYEES WITH DISABILITIES <i>Douglas Waxman</i>	155
CHAPTER 6 A SYSTEMATIC REVIEW OF VOCATIONAL INTERVENTIONS FOR YOUTH WITH PHYSICAL DISABILITIES <i>Shakira Hanif, Halie Peters, Carolyn McDougall and Sally Lindsay</i>	181
<b>PART 3 WORK ROLE AND WELL-BEING</b>	
CHAPTER 7 PEOPLE WITH PHYSICAL DISABILITIES, WORK, AND WELL-BEING: THE IMPORTANCE OF AUTONOMOUS AND CREATIVE WORK <i>Robyn Lewis Brown, Mairead Eastin Moloney and Gabriele Ciciurkaite</i>	205
CHAPTER 8 DISABILITY AND COMMUNITY LIFE: MEDIATING EFFECTS OF WORK, SOCIAL INCLUSION, AND ECONOMIC DISADVANTAGE IN THE RELATIONSHIP BETWEEN DISABILITY AND SUBJECTIVE WELL-BEING <i>Sara E. Green and Brianna Vice</i>	225
<b>PART 4 THE FUTURE OF WORK</b>	
CHAPTER 9 DISABILITY AND THE FUTURE OF WORK: A SPECULATIVE ESSAY <i>Richard K. Scotch and Charles E. McConnel</i>	249
ABOUT THE AUTHORS	267
INDEX	273

# INTRODUCTION: EMPLOYMENT AND PERSONS WITH DISABILITIES

In the literature about employment among persons with disabilities, research results depend on the purpose of the definitions of work disability, the discipline within which it takes place, the model or paradigm of disability in which it is framed and the cultural context in which the employment occurs (Lederer, Loisel, & Rivard, 2014). The definition and the measurement of the conceptual elements of the definition of disability incorporates a variety of approaches and provides different results to the employment question. For example, the use of a functional limitation measure to identify the group with disability creates a larger population and somewhat different one than the use of a measure of participation, be it social or employment related, or the use of a self-proclaimed disability identity. This volume seeks to address those factors which have made describing, and examining the work experience of a person with a disability difficult. We encouraged authors to examine how employment for persons with disabilities has been defined, conceptualized and measured in practice, in policy decision making, in various industries, and in various social science research disciplines. We had hoped to get a variety of approaches to the conceptualization of work for those with disability, how they evolved over time or how they differ across cultures, organizations, and types of disability. What you get in this volume is the beginning of the examination of the variety of contextual framing of employment for those with disability, the well-being factor that employment provides and the continued impact as well as the interaction of gender, poverty and education and other socioeconomic characteristics on the workplace participation.

While we didn't expect to get all that we asked for we did receive and present in this volume an interesting range of what are important factors in employment for persons with disabilities from a rather wide perspective as well as the classic examinations of opportunities and barriers. Also we received exploration of these issues from a wide range of cultural contexts from South Africa to Italy. We also got observations from a variety of disciplines including Occupational Therapy, Sociology, Economics, Human Resources, Law, and Health Care Science.

We hope this volume will begin to broaden the social science perspective to examine some very important aspects of the work situation that do not get as much attention in the general social science literature. For example:

1. How does the organizational culture, which includes norms, traditions, values, and beliefs, impact the disabled worker? Are organizational cultures different across size, type or purpose of the organization? Do these impact the employee with disabilities differently and how do they impact the non-disabled workers as well?
2. How does organizational structure influence the work experience of a disabled worker? Does size, type, or purpose of the organization contribute to the accessibility of the job, discrimination on the job, the ability of the worker to advance, or the ability to maintain tenure?
3. What impacts the social dimension of a person's work experience when they have a disability? What kinds of relationships with colleagues, supervisors and clients are experienced and how do the types of work environments or social or cultural constraints influence those relationships?
4. How does the definition and measurement of the population with a disability influence the levels of employment? Does a functioning limitations definition and measure which identifies the person as "at risk" to experience discrimination or other barriers in the work place give a more realistic picture of employment or is being unable or limited in ability to work the better definition and measure? How does severity of the limitation or the duration of the problem factor in?
5. What and where are the physical barriers/physical supports to the inclusion of persons with disabilities in the work setting? Are the issues workload, tools, chemicals or other processes, table heights, computer programs, repetitive motion requirements, lifting or carrying, communication issues, etc.? How balanced are the barriers compared to the supports?
6. What are the mental/emotional/behavioral factors that can be barriers/supports to the inclusion of persons with disabilities in the work setting? What kind of demands are made and what kinds of stress or pressure are created in the workplace related to time, performance or productivity and other factors that would measure a person's success? What kind of autonomy and control of tasks or schedules are available to the person in the job? What help is available?
7. How do age, gender, race, education, or type of disability influence employment outcomes. Does it make a difference if one lives in a rural area, or urban. What impact does transportation have on the employment equation? Does the sector of the country or the type of cultural/religious norms embraced by the country, or whether the country is developing or undeveloped impact opportunities to be employed?

(adapted from Lederer et al., 2014).

There are also big picture influences on work disability that are influenced by the sociodemographics of the culture. For example, an aging society may mean that more jobs – but certain types of jobs – are available than people to

fill them, or there may be residual effects from an economic recession. Finally, cultural attitudes and norms related to gender (“women should not be in the work force”), race, or the appropriateness of a particular type of work can also subtly influence the employment of persons with a disability. One volume can’t possibly raise all the issues but it raises some of them and is an important step in identifying and exploring the many gaps in our employment knowledge as well as encouraging continued research. We have made a start in addressing these gaps and encourage the fields of social science to continue to pursue these issues.

This volume addresses four important areas of employment: (1) The impact of intersectionality on employment and income for persons with disabilities; (2) Disability inclusion strategies and interventions; (3) How employment contributes to well-being; and (4) The future of employment for the population with disabilities. Below, I explore several of the cross-cutting issues that this volume identifies as well which can also contribute to the elaboration of employment problems.

### *Definition and Measurement of Disability*

Although a more standardized definition and measurement of disability has been established in the United States in leading census, health, and employment surveys sponsored by the Federal Government once again we are faced with a variety of definitions and measures of the disability population in the submissions to this volume. Since this is such an international group of papers that is not unexpected. However, readers should keep in mind that the definitions and measures vary somewhat extensively although there is a strong minority that have used a functional limitation definition and measure.

The definition and measurement of the population is an important element for the generalization and interpretation of these papers about work and should always be kept in mind. An examination of the measurement of disability as reflected by indications of limitations in physical, mental and emotional functioning referred to as Basic Actions in [Altman and Bernstein \(2008\)](#) differs considerably from measures of participation which is identified as Complex Activities in the same work. In the United States, the measures of Complex Activities (inclusion in social activities, work and other participation activities) identifies 14.3% of the population ages 18 and above while a measure based on Basic Actions identifies about twice as much of the population ages 18 and above, 29.5% ([Altman & Bernstein, 2008](#)). When we apply those two different definitions and measures to employment we find that only 23.3% of those measured by Complex Activities had a job in the last week while 41.9% of those who were measured by Basic Actions worked last week ([Altman & Bernstein, 2008](#); p. 63). This demonstrates the key role that definition and measurement play in elaborating the employment issues addressed.

So, for example, the Hanif, Peters, McDougall and Lindsey (Chapter 6) paper limits their scoping analysis to papers that address vocational interventions for young people with physical conditions defined by such conditions as spinal cord injuries, cerebral palsy, amputation, juvenile rheumatoid arthritis, neuromuscular disease, scoliosis, movement disorder, muscular dystrophy, spina bifida, or stroke. They do not seem to include vision or hearing disorders or cognitive or mental health problems. On the other hand the Addabbo, Krishnakumer, and Sarti (Chapter 3) paper uses a broader functional limitations measure that includes sensory limits, intellectual and emotional limitations and of course mobility problems. The Pettinicchio and Maroto paper (Chapter 1) uses both a participation measure (limitations in work) as well as a functional limitation measure reflecting the standardized measure now in place in federal surveys in the United States. The Haley and Dajani (Chapter 2) also use the standardized measure as it appears in the American Housing Survey along with an indicator of fair or poor health. Finally, Scotch and McConnel in their essay about the future of work for persons with disabilities (Chapter 9) use the umbrella term “disability” as defined in the International Classification of Functioning, Disability and Health (ICF) to represent the population with impairments, activity limitations or participation restriction as elaborated in the American’s with Disabilities Act (ADA).

Small surveys are used in the well-being papers (Chapters 7 and 8) which both interestingly enough take place in Florida. The emphasis in those two studies is primarily on basic actions or limitations in physical functioning, although Chapter 7 has a strong ADL/IADL element. The case study from South Africa (Chapter 4) also approaches the definition and measurement more along ICF lines concerned with impairment, activity limitation and participation limitation.

### *Intersectionality of Gender and Disability*

At least two of the chapters take a very extensive interest in the interaction of gender and disability as it impacts employment (Chapters 1 and 3). Both studies identify the important interaction effects between gender and disability, especially how it effects income for those fortunate enough to be in the workforce. The universality of this gender/disability interaction is demonstrated by the fact that one of the studies took place in the United States and the other in Italy. By highlighting how different types of disabilities interact with gender to produce varying degrees of negative labor market outcomes, the authors of Chapter 1 documents a hierarchy of disadvantage where women with multiple and cognitive disabilities continually have the lowest employment rates and earnings levels. When “all covariates were held at their means, men without disabilities had an employment rate of 82% and average earnings of

\$59,000 per year, but men with multiple disabilities had an employment rate of 17% and average earnings of \$37,000” (Pettinicchio and Maroto, Chapter 1). The analysis showed that women with multiple disabilities had a 16% employment rates and earnings of \$29,000, putting them at the very bottom of the hierarchy.

The case study (Chapter 4) has also approached intersectionality from a different perspective. In that chapter the organization studied realized that its diversity initiatives focused primarily on race and gender but failed to recognize how these identities intersect with (dis)ability amongst other identity categories and the impact those intersections may have on employment. So factors such as race, gender and class intersect to situate persons with disabilities in social positions of either privilege or oppression. In the South African context the effects of the apartheid stratification can render black women in townships of rural areas marginalized across the intersections of race, gender, class and disability. The authors of Chapter 4 indicate that the organization studied was mindful of the interactions and attempted to include those in the formulation of strategies in order to construct a comprehensive and coherent disability mainstreaming approach.

Chapter 2 additionally addresses the intersection of poverty with disability as it affects earned income using variables associated with housing support, food stamps and receipt of public assistance to identify the poverty status. While the analysis is limited to heads of households who are millennials (aged 19–25) it captures important indications of the transition period when young adults with disabilities attempt to follow the expectations for all adults of employment and earning a wage.

### *Type of Employment*

An important finding by [Presser and Altman \(2002\)](#) about employment in the 24 hour economy indicated that more than one-fifth of employed persons with disabilities work late or rotating shifts, about the same percentage as nondisabled workers and receive wages similar to those of their nondisabled counterparts. So the types of work schedules as well as the types of actual work (manufacturing, desk jobs or service provision) of the employment that is available is important to take into consideration. However, it is not just holding a job that is considered important in the big picture but whether that job contributes to the well-being of the person. In Chapters 7 and 8 the well-being of the person with the disability is examined in relationship to either the autonomy or creativeness of the job (Chapter 7) or just having a job and/or social inclusion (Chapter 8).

Access to autonomous and creative work has been found to be important for the whole population. The authors of Chapter 7 document that such types of work are sought after by the population in general indicating that engaging in interesting work and having autonomy in the job are ranked higher or equal

to income among preferred job characteristics. Because persons with disabilities tend to have a higher incidence of depression the authors of Chapter 7 sought to explore whether or not having interesting work and job autonomy could also lift the well-being of those who have a disability and work.

In Chapter 8, the authors only investigated the impact of any kind of job on well-being. They found that differences in subjective well-being were explained by social inclusion of any kind and economic factors. Adaptive equipment, companion and caregiver services while important to facilitate social participation are also costly and only partially covered by insurance or government programs. The findings indicate less well-being for the population with disability because of the social and economic limitations they face.

*Reciprocal Impacts: Person on Organization, Organization on Person*

Some of the research in this volume examines the bigger picture of the organizational setting and the impact of the organizational values and strategies. Chapter 4 examines a case study of a health care organization's approach to increasing employment of persons with disabilities. Chapter 5 examines literature about organizations to establish a model of useful interventions and practices and Chapter 6 is a scoping review of vocational interventions for young people transitioning to the work environment.

In Chapter 4 it is important to have country legislation that encourages inclusion of persons with disabilities in employment, but that is really found to be insufficient to produce the desired changes alone. The anti-discrimination and fairness paradigm that results from legislation acknowledges that prejudice can keep marginalized groups out of employment but does not address the organizational cultural changes necessary to make the inclusion of "others" part of the organizational diversity. This ownership by the organization itself shifts the desire for mainstreaming disability internally rather than as an outward compliance with externally forced legislation. In some ways Chapter 4 becomes an actual case study of the model elaborated in Chapter 5 which emphasizes the internal organizational components essential to improving disability employment.

In Chapter 5 the model that is generated to successfully employ persons with disabilities also indicates a need for a change in organizational beliefs and culture. The model indicates that the starting point for improved employment of persons with disabilities is for senior management to recognize the business advantage in hiring persons with disabilities for both social responsibility and productivity. Such a vision must be communicated throughout an organization for managers and common employees so that eventually there is a cultural change for the whole organization. Once senior management makes the commitment to diversity and inclusion other employees throughout the

organization need to receive disability awareness training to sensitize them to the circumstances so they appreciate the need for accommodations and mentoring. At the same time the person with disability needs to be evaluated and held accountable like any other employee thus promoting job necessary expectations and improving relationships with co-workers.

While Chapter 6 focuses more narrowly on youth with physical disabilities, this review of the literature also records the numerous barriers to inclusion for that group as for the larger groups discussed in Chapter's 4 and 5. Similar issues of discrimination, lack of accommodations are also documented. While the review indicates that good research and evidence on interventions are limited, the pattern of intervention are not dissimilar from those found in the case study (Chapter 4) and the organizational intervention model (Chapter 5), but focus on the preparation and training of the youth rather than within the organization where the jobs take place. As such, the interaction of the vocational interventions for the youth with the organizations which supply the jobs appears to be a missing piece. While the model in Chapter 5 does include the use of vocational organizations to provide the persons with disability who can be employed none of the chapters seem to elaborate on how the vocational programs and organizations with jobs can effectively interact. That can be the subject of another volume.

### *Similarity of Cross Cultural Impact*

The papers included in this volume come from Canada, the United States, Italy and South Africa and yet they seem to emphasize the commonality of the problems associated with employment for people with disabilities regardless of country or continent. As mentioned above Chapter 4 seems to be a case study demonstrating the model developed in Chapter 5, yet the model was written by a Canadian and based on a review of international literature (including Scandinavian, Australian, European and American) and Chapter 4 is a case study of a health care organization in South Africa.

In the same way Chapters 1 and 3 use data from the United States or Italy and yet the results while organized by different disciplines provide very similar findings. While Chapter 1 is more focused on the actual interactionality of gender and disability the findings are similar in Italy. Age, education and marital status effects are also very similar.

### *Future of Employment*

The last chapter of the volume looks to the future and the potential for employment as the transition to a more technological and service based economy

continues. While work disparities related to employment for persons with disabilities have continued over recent years and even possibly declined the authors of Chapter 9 explore the changes in the context and types of work as we move forward into the future and examine how they feel the population with disabilities will or will not be included in that future workforce.

Advances in assistive technology and telecommunications may make work for persons with disabilities more easily accessible. However the changing nature of the economy and the types of work that will be available in the future may also negatively impact employment for persons with disabilities. On the one hand global competition, deregulation and the growth of the service sector in the Uber or Airbnb directions have created sharp changes in where and how work is accomplished. However, automation, computers, telecommunications are demanding fewer physical skills but greater intellectual ones requiring greater education and more flexibility in a variety of tasks. Even the 24 hour provision of services makes work different and not tied to when the sun is up which can be another influence on what, when, where employment is available for the person with disability or all persons who want and need to work. This paper raises a lot of research questions and insights into how the world of work is changing and may or may not change the conception of work for everyone not just those with disability.

Barbara M. Altman  
*Editor*

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**PART 1**  
**RELATIONSHIP OF GENDER AND**  
**OTHER SOCIODEMOGRAPHICS**  
**TO WORK ROLE**

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# CHAPTER 1

## EMPLOYMENT OUTCOMES AMONG MEN AND WOMEN WITH DISABILITIES: HOW THE INTERSECTION OF GENDER AND DISABILITY STATUS SHAPES LABOR MARKET INEQUALITY

David Pettinicchio and Michelle Maroto

### ABSTRACT

*Purpose – This chapter assesses how gender and disability status intersect to shape employment and earnings outcomes for working-age adults in the United States.*

*Methodology/approach – The research pools five years of data from the 2010–2015 Current Population Survey to compare employment and earnings outcomes for men and women with different types of physical and cognitive disabilities to those who specifically report work-limiting disabilities.*

*Findings – The findings show that people with different types of limitations, including those not specific to work, experienced large disparities in employment and earnings and these outcomes also varied for men and women. The multiplicative effects of gender and disability on labor market outcomes led to a hierarchy of disadvantage where women with cognitive or multiple disabilities experienced the lowest employment rates and earnings levels.*

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*However, within groups, disability presented the strongest negative effects for men, which created a smaller gender wage gap among people with disabilities.*

*Originality/value – This chapter provides quantitative evidence for the multiplicative effects of gender and disability status on employment and earnings. It further extends an intersectional framework by highlighting the gendered aspects of the ways in which different disabilities shape labor market inequalities. Considering multiple intersecting statuses demonstrates how the interaction between disability type and gender produce distinct labor market outcomes.*

**Keywords:** Disability; gender; intersectionality; labor market inequality

## INTRODUCTION

Despite protections from equal rights and antidiscrimination legislation, women and people with disabilities are still disadvantaged in the labor market. Even though women have increased their participation in the labor force and made large gains in education since the 1970s, a gender wage gap exacerbated by childcare responsibilities remains (Blau & Kahn, 2006; DiPrete & Buchmann, 2013; England, 2010). Among people with disabilities, labor force participation has declined over the last 30 years, and there is considerable variation in employment rates by disability status. For instance, people with mental or cognitive disabilities have lower rates of employment than individuals with physical disabilities, regardless of occupation (Jones, 2008, 2011; Maroto & Pettinicchio, 2014b, 2015; Wilkins, 2003). Earnings gaps are also larger for people with work limitations, cognitive difficulties, and independent-living barriers, but people with hearing difficulties tend to experience the smallest earnings gaps (Baldwin & Johnson, 1994; Burkhauser, Daly, Houtenville, & Nargis, 2001; DeLeire, 1995; Lewis & Allee, 1992; Unger, 2002). Building on the evidence for continuing wage gaps by gender and disability type, we seek to address how these two statuses jointly influence labor market outcomes for workers. Previous research demonstrates large additive effects on employment and earnings. Using an intersectional approach as our foundation, we illustrate how these effects become multiplicative.

Many have sought to answer why labor market barriers and economic inequalities among women and people with disabilities have not declined more precipitously since the passage of key pieces of legislation, such as the Civil Rights Act of 1964 and the Americans with Disabilities Act of 1990. For women, scholars initially pointed to problems of enforcement of antidiscrimination legislation placing much of the burden on victims of discrimination

(Burstein, 1990; Reskin, 2001). They have also alluded to class-based inequality in accessing family policy intended to provide women with resources and opportunities to participate in the labor force (Korpi, Ferrarini, & Englund, 2013; Pettit, Hook, & Hagan, 2009). Beyond the policy focus, researchers have drawn from statistical discrimination, implicit bias, and status characteristics theories to show how employment discrimination can result from both employers' intentional actions based on prejudice, as well as unconscious bias (Arrow, 1973; Reskin & Roos, 1990; Ridgeway, 1991, 1997). Thus, scholars agree that labor market discrimination, shifts in labor market supply-and-demand, and occupational segmentation also contribute to the gender wage gap in spite of antidiscrimination policy (Acker, 2006; Blau & Kahn, 2006; Ridgeway, 2011).

Many of these explanations also pertain to the persistent labor market inequality among Americans with disabilities (Baldwin & Johnson, 1994; Kaye, Jans, & Jones, 2011; Kruse & Schur, 2003; Robert & Harlan, 2006; Schwochau & Blanck, 2000; Stein, 2003). In addition to broader claims about the lack of policy enforcement (Maroto & Pettinicchio, 2014a), scholars also point to differences in human capital, education, age, and job preferences (Blanck, Adya, Myhill, Samant, & Chen, 2007; Blanck, Schur, Kruse, Schwochau, & Song, 2003), workers' dependence on public assistance (Acemoglu & Angrist, 2001; She & Livermore, 2007), the nature of work (Beegle & Stock, 2003; Jones & Sloane, 2010), occupational segregation (Maroto & Pettinicchio, 2014b), and employer attitudes (Domzal, Houtenville, & Sharma 2008; Hunt & Hunt, 2004; Unger, 2002). Disability may receive a lower status value through ascriptive processes that are especially prevalent when employers base their preferences about people with disabilities on limited information about average group differences (Arrow, 1998; Blanck et al., 2003; Ridgeway, 1991; Webster & Hysom, 1998). Importantly, stereotypes and employer attitudes not only vary by the nature of the disability, but also by how disability type interacts with other characteristics such as gender.

Intersectional studies show that workers' experiences are unique to their multiple intersecting identities. Employers often make decisions based on stereotypes that are about a combination of statuses (Browne & Misra, 2003), which results in multiplicative effects that extend disadvantages (Greenman & Xie, 2008; Snipp & Cheung, 2016). Only recently have studies begun to examine disability in relation to other characteristics in shaping economic inequality, and few disaggregate the effects of these interactions by the nature of disability. This has become all the more relevant given the way in which the intersectionality of multiple statuses defines "modern discrimination" (Marchiondo, Ran, & Cortina, 2015). Women with disabilities may be "twice penalized" (O'Hara, 2004) or in "double jeopardy" (Doren & Benz, 2001) as a result of structural and attitudinal factors associated with the intersection of both statuses. Drawing from Kimberlé Crenshaw's recent TedWomen Talk (Crenshaw, October 27, 2016), understanding how disability and gender intersect to shape employment and earnings can shed light as to why employers may hire women and, may hire people with disabilities, but not women with disabilities.

In this chapter, we consider the intersection of gender and disability in shaping labor market outcomes among people with different disabilities. More specifically, we focus on variation in both employment rates and average earnings among men and women who report either a work-limiting disability or disability more generally. We address the following research questions: Are the effects of gender and disability on employment and earnings multiplicative? Do they compound disadvantage as theories of intersectionality would predict? And, how do employment rates and average earnings vary for men and women with different types of disabilities, including those disabilities identified as work limiting? Given that employer preferences, workplace accommodations, occupational segregation, and earnings vary considerably by the nature of a person's disability, it is important to break apart disability to illustrate how "being disabled" interacts with gender in the labor market.

We pool five years of data from the 2010–2015 Current Population Survey (CPS) to analyze how rates of employment and annual earnings vary by disability status and gender. For these years, the CPS included both work-limiting *and* broader definitions of disability, which allows us to compare gendered outcomes across a variety of measures. We specifically examine how work-limiting disabilities and how the presence of cognitive, physical, independent living, self-care, sensory, and multiple disabilities differentially influence earnings and employment for men and women.

Our findings show that people with different types of limitations, including those *not specific to work*, experienced large disparities in employment and earnings and these outcomes also varied for men and women. By interacting the presence of different disabilities with gender, we demonstrate that even though women with disabilities still face a double disadvantage in the labor market, disability has stronger negative effects among men. We suspect that these effects are related to dominant notions of masculinity that can make disability more limiting for men who are less able to inhabit masculine roles in the labor market. In presenting a more intersectional quantitative analysis of disability and gender, we highlight the importance of considering multiple statuses, including those related to the presence of different types of disabilities and limitations, in perpetuating labor market inequalities.

## GENDER, DISABILITY, AND WORK

Status characteristics like gender and disability influence the ways in which supply and demand side factors contribute to labor market inequalities. Despite gains in education and increases in labor force participation, men still out-earn women even after accounting for individual characteristics, occupational segregation, and differences in work-effort (Blau & Kahn, 2006; Charles & Grusky, 2004; Ridgeway, 2011). These outcomes also vary by family

status, where women experience disadvantages in conjunction with childbearing and the added career interruptions associated with parenthood (Budig & England, 2001; England, 2005).

Although disability has received less attention within stratification research, disparities by disability status are also readily apparent, and several factors help to explain declining employment levels and stagnant wages within this group. For instance, the voluntary and involuntary transition of disabled individuals into occupations that allow flexibility in hours often leads to lower earning part-time and non-standard work arrangements (Blanck et al., 2003, 2007; Schur, 2002, 2003). Other income sources, including Supplemental Security Income, coupled with persistent obstacles in finding employment that provides sufficient wages, can limit the motivation to work (Haveman & Wolfe, 1990, 2000). At the same time, unfavorable and stereotypical attitudes among employers about employees with disabilities, including limited productivity, weakness, and the inability to maintain employment, persist (Kaye et al., 2011; Schwochau & Blanck, 2000; Schur, Kruse, Blasi, & Blanck, 2009; Stein, 2003; Unger, 2002). Thus, when people with disabilities do work, they tend to be clustered into lower skilled, lower paying occupations, contributing to wage inequality (Domzal et al., 2008; Kaye, 2009; Lewis & Allee, 1992; Maroto & Pettinicchio, 2014b).

Importantly, labor market outcomes also vary by the nature of a person's disability where a hierarchy of preferences for types of disabilities exists in the workplace (Shaw, Chan, & McMahon, 2012). People with mental or cognitive disabilities have lower rates of employment than individuals with physical disabilities, regardless of occupation (Baldwin & Johnson, 1994; Jones, 2008, 2011; Maroto & Pettinicchio, 2015; Wilkins, 2003). They also experience significantly greater levels of occupational segregation than people with other types of disabilities. Maroto and Pettinicchio (2014b) found that people with cognitive disabilities were overrepresented in the food preparation and service industries where the average annual earnings were less than half the national average. This parallels other findings showing larger earnings gaps for people with work limitations, cognitive difficulties, and independent-living barriers but smaller disparities among people with hearing difficulties (Baldwin & Johnson, 1994; Barnartt & Christiansen, 1985; Burkhauser et al., 2001; DeLeire, 1995; Lewis & Allee, 1992; Unger, 2002). Finally, employers may hold more favorable attitudes towards employees with physical impairments compared to those with psychological impairments, suggesting that the latter are more stigmatized and potentially experience more discrimination and harassment (Kavanagh et al., 2015).

Most quantitative studies seeking to shed light on disability labor market outcomes typically control for a host of factors that include gender. However, results have been mixed as to whether outcomes vary significantly between men and women with disabilities. Certain early studies found few differences in disability employment and earnings by gender (see Bennefield & McNeil, 1989; Bowe, 1978). Other work emphasized gender differences in explaining earnings

disparities among workers with disabilities but with mixed findings. For instance, [Luft \(1975\)](#) found that disability especially affected black women in the labor market, and [Johnson and Lambrinos \(1985\)](#) indicated that discrimination was a larger factor for women with disabilities. But, in their analyses of CPS data, [Haveman and Wolfe \(1990\)](#) found a convergence of disabled women's earnings with that of disabled men's suggesting that women's gains were a result of political activism and an earnings increase among younger women with more than a high school education.

More contemporary studies have been rather ambiguous about the gendered effect of disability on labor market outcomes. [Acemoglu and Angrist \(2001\)](#) found differences in employment trends between men and women with disabilities but no consistent effects on disabled women's wages.<sup>1</sup> [Kavanagh and colleagues \(2015\)](#) found few differences in socioeconomic disadvantage between men and women with the same disability in the Australian labor market but noted that women with disabilities were significantly underrepresented in paid work. Although they may not necessarily invoke an intersectional framework, several studies make a more explicit connection between gender and disability pointing to the compounding effects of multiple identities in perpetuating the disability gender wage gap (see [Barnartt & Altman, 1997](#); [Bradsher, 1996](#); [BLS, 2015b](#); [Emmett & Alant, 2006](#); [Kessler Foundation/NOD, 2010](#); [Maroto & Pettinicchio, 2015](#); [Randolph & Anderson, 2004](#); [Schur, 2004](#); [Woodhams, Lupton, & Cowling, 2015](#)).

Quantitative labor market research on gendered disability employment and earnings outcomes provides less than definitive answers about why men and women with similar disabilities experience different levels of inequality. Nonetheless, there is some consensus that categorical inequality based on both disability and gender is similarly explained by supply-and-demand side factors that include human capital, job choice and involuntary job placement, occupational ghettoization, and employer bias and discrimination. Because women and people with disabilities are more likely to experience occupational clustering, being placed in precarious and nonstandard work arrangements and in work that conventionally (and wrongfully) might be seen as "suitably matched" to their status, it suggests that women with disabilities are especially disadvantaged in the labor market.

## INTERSECTIONALITY

Existing work showing how employment and earnings vary for women and men with different types of disabilities demonstrates the need for more intersectional analyses of labor market inequalities (see [Barnartt, 2013](#) and [Barnartt & Altman's, 2013](#) volume on disability and intersecting statuses). Labor market outcomes for people with disabilities are shaped by other relevant status

characteristics like race, class, age, and gender (BLS, 2015a, 2015b; Bradsher, 1996; Kessler Foundation/NOD, 2010). Scholars interested in how the intersection of race and gender produce inequalities have alluded to disability as a social category that positions individuals within a “matrix of domination” (Browne & Misra, 2003; Collins, 1990, p. 489). However, their analyses do not provide a systematic account as to how disability might intersect with gender. And, although most if not all studies of disability labor market inequality control for the effects of gender, few have sought to delve deeper into gendered dimensions of disability inequality, let alone contextualize those findings in terms of intersectionality.

Intersectionality provides a framework incorporating multiple dimensions of disadvantage by addressing the interaction and intersection of different bases of stratification, as well as broader systems of oppression (Choo & Ferree, 2010; Crenshaw, 1991; MacKinnon, 2013; McCall, 2005). In other words, “Intersectionality refers to the interaction between gender, race, and other categories of difference in individual lives, social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions in terms of power” (Davis, 2008, p. 68). Proponents of this perspective therefore argue that inequality, subordination, and oppression cannot be understood without considering multi-dimensional categorical group membership. As early as 1980, US courts recognized that discrimination faced by black women was distinct from other forms of discrimination (see *Jefferies v. Harris County Community Action Association*, No. 77-1848) — that there is an “inseparability” of race, gender, and national origin (Wei, 1996) shaping employment and earnings outcomes. Our study incorporates these perspectives by highlighting the intercategorical complexity related to different disability statuses and gender.

By addressing the role of gender and disability type in regards to economic inequality, we present a disaggregated or intersectional approach to disability research that expands the focus beyond gender, race, and class (McCall, 2001).<sup>2</sup> We investigate two components at the intersection of disability and gender. First, we study the combined effects of these statuses on employment and earnings in order to better understand the double disadvantage faced by women with various disabilities. We incorporate hierarchies of disadvantage with disability types with the expectation that women with cognitive or multiple disabilities, who most often face the greatest levels of prejudice and discrimination, will experience the largest employment and earnings disparities across groups. Second, we examine within-group disparities, which allows us to discuss how disability leads to different labor market effects for men and women. We expect that within groups of men and women, a disability will have a stronger negative effect among men due to its association with weakness, which is often incompatible with norms of masculinity. Although there may be distinct labor market outcomes for people with disabilities and for women, the intersection of disability type and gender also represent specific obstacles and barriers contributing to lower employment levels and earnings.

*The Double Disadvantage of Gender and Disability*

Women with disabilities belong to “a specific category of bias” (Kotkin, 2008). They face a double disadvantage (Johnson & Lambrinos, 1985) or a “double handicap” due to the intersection of multiple disadvantaged statuses (Hernández, 2006; Randolph & Anderson, 2004; Schur, 2004; Shaw et al., 2012). This leads to lower employment levels and higher poverty rates for women with disabilities than both women without disabilities and men with disabilities.

Understanding gendered disability inequality requires explanations that take into account the intersection of both statuses. For example, because women with disabilities are more likely to have parenting responsibilities at home, they have fewer opportunities to develop network ties and social capital that lead to job opportunities. Additionally, they are less likely to develop job experience while in school, entering the labor market already at a disadvantage (Doren & Benz, 2001). In their meta-analysis of findings about disability and work, Pompeii and colleagues (2005) found that women with disabilities cited numerous reasons, including marriage and pregnancy, in addition to their disability, for leaving work.

Family roles that continue to limit labor market activity and education, as well as employer perceptions of skill and performance, negatively affect the economic wellbeing of women with disabilities (Hale, Hayghe, & McNeil, 1998; Jones & Sloane, 2010; Leicht, 2008). When at work, women with disabilities are especially influenced by “gendered employment relations” (Jenson, 1996, p. 5). The so-called “feminization of employment norms” involves the growing association of women (especially immigrant women and women of color) with precarious employment (Cranford, Vosko, & Zukewich, 2003; Morris, Bernhardt, & Handcock, 1994; Vosko, 2003). A similar pattern has emerged among workers with disabilities, making certain workers with both characteristics more vulnerable in the labor market (see Schur, 2004; Shuey & Jovic, 2013). Women with disabilities face greater odds of being clustered or “ghettoized” into set-aside (often low paying) occupations (Maroto & Pettinicchio, 2014b), where according to Robert and Harlan’s (2006) work on public sector employment, they feel unchallenged and stuck.

Similarly, research points to discrete negative perceptions held by employers based on the intersectionality of statuses and identities. O’Hara (2004) found that women with more prejudiced disabilities had lower average wages than women whose disability elicited less prejudice. Mereish (2012) found that Asian American and Pacific Islander women with disabilities were more likely to report experiencing discrimination in the workplace than those who did not report any disability. In addition to ethnicity and gender, work by Pilling (2012) on the intersection of disability, gender identity, and LGBTQ status in the workplace found that employees identifying with either female or male were

less likely to disclose mental illness fearing it would undermine their authenticity as LGBTQ disabled by employers.

Overall, men and women with the same types of disabilities have significantly different wages with variation extending to disability type as well. This relates to factors like the use of different mobility aids by women in the workplace (Pompeii, Moon, & McCrory, 2005), the interplay between psychiatric disorders and gendered occupational clustering (Ettner, Frank, & Kessler, 1997), and occupational norms around women with episodic disabilities (Vick & Lightman, 2010). Additionally, women with the same disability as men “may require different accommodations because the nature of their work differs” (Baldwin, Zeager, & Flacco, 1994). This conclusion supports Leicht’s (2008) finding that “the labor market that traditionally dominant groups occupy is a moving target.” That is, being pigeonholed in a low earning occupation may be very difficult or impossible to break out of – something women with disabilities are especially likely to experience.

### *The Gendered Effects of Disability*

Gender presents an added layer in understanding disability labor market outcomes. This not only points to an interaction between gender and disability, but it also highlights the gendered aspects of different disability statuses shaping labor market inequalities. When combined with common conceptions of masculinity and femininity, this can result in differing outcomes and experiences for women and men. Although women with disabilities face a double disadvantage within the labor market, disability can be especially limiting for men due to the ways in which it conflicts with traditional norms of masculinity.

Gender is an interactional process where membership in certain gender categories must be continually enacted and performed (West & Zimmerman, 1987). When gendered performances break down, as they often do with the onset of a disability, masculinity becomes vulnerable (Connell, 1995). One reason for this is what Kavanagh and colleagues (2015) refer to as “the enactment of hegemonic forms of masculinity,” which denies people with disabilities access to certain “masculine” jobs associated with male physical strength (see also Sorensen, 2013; Verdier-Taillefer, Rouillet, Cesaro, & Alperovitch, 1994).

Numerous qualitative studies have demonstrated how disability erodes many of the privileges associated with masculinity because of its connection to weakness (Gerschick, 2000; Shakespeare, 1999; Shuttleworth, Wedgwood, & Wilson, 2012). People with disabilities are especially susceptible to widespread beliefs that they are too weak and too costly to employ, incapable of performing certain tasks, and underproductive when being considered for a job. These associations are troubling for men with disabilities because they conflict with norms of masculinity that emphasize power and autonomy (Shuttleworth et al., 2012).

As a result, we expect disability to have stronger effects on employment and earnings among men. If the presence of a disability is more limiting for men, this will also likely lead to a smaller gender gap among persons with disabilities as men's wages are suppressed, converging with the already lower wages among disabled women.

## DATA, METHODS, AND MEASURES

Due to its large sample size, inclusion of multiple disability questions, and detailed employment and earnings information, we analyze pooled Current Population Survey Annual Social and Economic Supplement (CPS) data from 2010 through 2015. The CPS includes more detailed measures of disability status, as well as information on whether a disability is work limiting or not. Traditionally, most labor market surveys have measured disability status with a question regarding the presence of a "work limiting" disability. In 2008, however, key work surveys including the CPS incorporated a broader set of questions that consider whether the respondent reports a vision, hearing, cognitive, ambulatory, self-care, and independent-living difficulties.

Although other surveys, such as the American Community Survey (ACS) and the National Health Interview Survey (NHIS), contain information on work-limiting disabilities, the CPS is one of the few surveys to include, in addition to specific limitations and disability as a work-limiting status, detailed information on employment, earnings, and worker class (Livermore et al., 2011). It also comprises large yearly samples, which helps in studying smaller groups like people with specific disabilities. We limit our sample to working-age adults between 25 and 61 years of age in order to account for continued schooling and early retirement. Our full sample consists of 596,199 individuals and our sample for employed respondents with earnings comprises 413,007 individuals.

We analyze the relationship between disability, gender, and labor market outcomes in two steps. First, we apply logistic regression models to estimate whether the respondent was *employed with earnings* in the previous year. In our tables and results, we report average marginal effects (AME), which provide the rate of change in employment (i.e., the predicted probability) relative to a unit change in an independent variable with covariate values averaged across the population (Long, 1997; Wooldridge, 2009).

We then use ordinary least squares (OLS) regression to estimate a respondent's *logged annual earnings* from wages and salary in the previous year. We log this variable in order to account for the skewed earnings distribution and to satisfy model assumptions. All monetary amounts also appear in 2015 US dollars. As shown in Table 1, 73% of male respondents and 64% of female respondents were employed between 2010 and 2015. Average wage and salary income over this time period amounted to \$63,000 for men and \$43,000 for women.

**Table 1.** Descriptive Statistics by Gender, CSP ASEC 2010–2015.

	Men		Women	
	Estimate	SE	Estimate	SE
<i>For all respondents</i>				
Employed with earnings	73.33	0.11	63.55	0.11
Any disability, difficulty, or limitation	11.82	0.08	12.23	0.08
Any work limiting disability	8.57	0.07	9.03	0.07
Any difficulty or limitation	7.82	0.07	7.98	0.06
Mutually exclusive disability type				
Cognitive limitation	1.02	0.03	0.97	0.02
Physical limitation	1.74	0.03	2.03	0.03
Independent living (IDL) limitation	0.26	0.01	0.35	0.01
Sensory limitation	1.54	0.03	1.08	0.02
Multiple limitations	3.25	0.05	3.55	0.04
Mean age (years)	42.89	0.03	43.14	0.03
Education level				
High school diploma	30.86	0.11	26.51	0.10
Less than a high school diploma	11.56	0.08	9.69	0.07
Some college	26.05	0.11	29.11	0.11
BA or beyond	20.60	0.10	22.72	0.10
Marital status				
Currently married	59.64	0.12	60.41	0.12
Never married	26.49	0.12	20.52	0.10
Formerly married	13.88	0.09	19.07	0.09
Any children present	27.36	0.10	33.11	0.11
Non-Hispanic black	11.01	0.08	12.79	0.08
Hispanic	16.76	0.09	15.69	0.08
<i>N</i>	285,902		310,297	
<i>For employed respondents</i>				
Mean wage and salary income (2015 dollars)	63,235.34	213.15	42,930.93	131.91
Weeks worked last year (weeks)	49.81	0.02	49.12	0.02
Usual hours worked per week (hours)	39.36	0.04	35.91	0.04
Government employee	14.32	0.10	20.25	0.12
Firm size				
500+ employees	46.78	0.14	51.78	0.15
<10 employees	16.14	0.11	13.64	0.10
10–99 employees	23.71	0.12	20.87	0.12
100–499 employees	13.37	0.10	13.71	0.10
<i>N</i>	213,896		199,111	

Source: Current Population Survey, ASEC, 2010–2015, working-age adults 25–61 years old, *N* = 596,199.

Notes: Estimates include sample survey weights. All estimates are provided as percentages unless otherwise specified.

Our key predictor variables relate to the respondent's self-reported disability status and gender. To address the different ways in which scholars have conceptualized disability status, we use three sets of measures within three separate models and compare our results across these measures. First, we incorporate a measure for the presence of a *work limiting disability* that identifies respondents who had "a health problem or a disability which prevents him/her from working or which limits the kind or amount of work" (Flood, King, Ruggles, & Robert Warren, 2015). Second, we include a measure for the presence of *any disability, difficulty, or limitation*. This variable identifies respondents who reported any physical, cognitive, sensory, or self-care limitation or difficulty.<sup>3</sup> Third, we created a measure for *disability type* to provide a more detailed description of the respondent's reported disability. This variable has six mutually exclusive categories: no disability (the referent); cognitive or mental disability; ambulatory or physical disability; independent living or self-care (IDL) disability; sensory (vision or hearing) disability; or multiple disabilities present.<sup>4</sup> In order to estimate how the relationship between disability status, employment, and earnings varies for men and women, we then interact these variables with the respondent's reported *gender* of male (the referent) or female.

Estimates of the prevalence of disability in the population vary based upon the measurement of disability and the type of limitations and difficulties included in the definition (Houtenville, Stapleton, Weathers, & Burkhauser, 2009). As seen in Table 1, 12% of men and women in the working-age population reported a disability, difficulty, or limitation between 2010–2015. Within this group, 9% reported a work-limiting disability and 8% reported a difficulty or limitation. These rates are consistent with previous research (Erickson, Lee, & von Schrader, 2012; Houtenville et al., 2009). Comparing rates by disability type, multiple disabilities were present among 3–4% of adults. Cognitive difficulties on their own affected about 1% of working-age adults. Two percent of working-age adults reported only a physical limitation, 1–2% of working-age adults experienced vision or hearing difficulties, and less than 1% experienced self-care and independent-living difficulties. These overall estimates of disability prevalence show that difficulties and limitations affect a small, but significant, proportion of the adult population.

Although many individuals who report specific disabilities also report work-limiting disabilities, these categories do not fully overlap, as shown in Table 2. Fifty-nine percent of people with any limitation also reported a work limiting disability, and 53% of people reporting a work-limiting disability did not list a physical, cognitive, or sensory limitation. These rates also varied with disability type, where 51% of respondents with a cognitive limitation, 57% of respondents with a physical limitation, 62% of those with an IDL limitation, 21% of those with a sensory limitation, and 76% of those with multiple limitations also reported a work-limiting disability. Thus, respondents did not always see a disability as limiting their ability to work.

**Table 2.** Percentage of Persons Reporting a Work-limiting Disability.

	Total		Men		Women	
	Estimate	SE	Estimate	SE	Estimate	SE
All respondents	8.80	0.05	8.57	0.07	9.03	0.07
With any difficulty or limitation	59.15	0.30	58.43	0.45	59.84	0.41
<i>With different limitations</i>						
Cognitive limitation	51.79	0.90	53.60	1.30	49.95	1.25
Physical limitation	57.62	0.62	61.14	0.92	54.72	0.84
Independent living (IDL) limitation	62.74	1.51	62.42	2.45	62.97	1.91
Sensory limitation	21.29	0.61	20.31	0.80	22.63	0.96
Multiple limitations	76.38	0.40	76.19	0.61	76.55	0.53

Source: Current Population Survey, ASEC, 2010–2015, working-age adults 25–61 years old,  $N = 596,199$ .

Notes: Estimates include sample survey weights. Estimates show the percentage of persons in each category reporting a work-limiting disability.

In addition to our key predictor variables, we include a host of control variables to account for different individual- and structural-level explanations for employment and earnings inequality discussed earlier in the chapter. We first include controls for the respondent's *age*, *educational attainment*, *marital status*, and *race*, key demographic and human capital factors associated with labor market outcomes (Browne & Misra, 2003; Jones, 2008; Leicht, 2008). We measure *age* in years and include a quadratic *age-squared term* to account for its non-linear relationship with employment and earnings. We measure *educational attainment* with a categorical variable that indicates whether the respondent completed high school (the referent), attended some college, or completed college with a bachelor's degree or higher. We measure *marital status* with a categorical variable that indicates whether the respondent was currently married (the referent), never married, or separated, divorced, or widowed. We indicate *race* with a categorical variable measured as non-Hispanic white or other (the referent), non-Hispanic black, or Hispanic.

Because women and people with disabilities might also differ from other workers in terms of work effort, shift type, and job choice, we account for these employment-related factors in models predicting earnings (Budig & England, 2001; Presser & Altman, 2002; Schur, 2002, 2003). We incorporate the respondent's *usual weekly hours of work* and *total number of weeks worked* in the previous year to control for his or her employment situation. We also include a measure to indicate whether the respondent was a *government employee*, and a categorical variable that measures *firm size* with the following categories: 500+ employees (the referent), less than 10 employees, 10–99 employees, and 100–499 employees. Finally, we include an indicator variable for the respondent's *major occupation* because occupational segregation influences earnings

for both women and people with disabilities (Charles & Grusky, 2004; Maroto & Pettinicchio, 2014b). In all models we also control for the *state of residence* and for the *survey year*.

## RESULTS

Our findings indicate that men and women with disabilities experienced labor market disadvantages in terms of employment and income, even after accounting for key human capital and demographic components. In addition, employment rates and earnings varied with different definitions of disability – whether work-limiting or not and the nature of the disability. This supports a more intersectional perspective on disability inequality where an individual’s status characteristics like gender interact with different disability statuses rather than with disability as a single category. We find that women with disabilities, especially those with multiple disabilities, had the lowest employment rates and earnings levels. However, disability tended to have stronger effects for men, leading to greater disparities between men with and without disabilities, as well as a diminished gender earnings gap among workers with disabilities.

### *Employment*

Table 3 presents results from logistic regression models predicting employment in association with disability status, gender, and a set of control variables. Models within Table 3 differ based upon the measure of disability used. Model 1 includes a work limiting disability, Model 2 includes any reported disability or limitation, and Model 3 includes a disaggregated disability type variable. In order to determine how the effects of disability vary by gender, we interact these variables in all models. We also present the summary results of these interactions in Fig. 1, which plots the predicted percentage point difference in employment rates for men and women with different disabilities.

As expected, we find consistent employment gaps by gender and disability. Employment rates for women without any disabilities were 12–13 percentage points lower than those for men without any disabilities, net of key control variables. Disability was also associated with lower rates of employment by 41–62 percentage points, but this varied with the type of disability. Combining these effects presents a double disadvantage for women with disabilities who experience the negative repercussions of both statuses. Despite this multiplicative effect, the gender gap was smaller among men and women with different types of disabilities and the size of the gap varied with disability type, as seen in Fig. 1. Except for individuals with IDL or sensory limitations, women saw

**Table 3.** Results from Logistic Regression Models Predicting Employment by Disability Status and Gender.

	Model 1			Model 2			Model 3		
	AME	b	SE	AME	b	SE	AME	b	SE
Intercept	.287	1.607***	(.011)	.289	1.532***	(.010)	.286	1.531***	(.010)
Work limiting disability	-.624	-3.027***	(.020)						
Any difficulty or limitation				-.473	-2.055***	(.016)			
Limitation type ( <i>Ref: No limitation</i> )									
Cognitive limitation							-.478	-2.095***	(.044)
Physical limitation							-.495	-2.189***	(.034)
IDL limitation							-.510	-2.287***	(.091)
Sensory limitation							-.164	-.709***	(.032)
Multiple limitations							-.613	-3.054***	(.034)
Female	-.129	-.626***	(.006)	-.124	-.603***	(.006)	-.124	-.602***	(.006)
<i>Interactions</i>									
Work limiting disability*Female	.102	.548***	(.027)						
Any difficulty or limitation*Female				.066	.344***	(.023)			
Disability type ( <i>Ref: No disability</i> )									
Cognitive limit*Female							.094	.503***	(.060)
Physical limit*Female							.129	.739***	(.045)
IDL limit*Female							.036	.177	(.123)
Sensory limit*Female							.050	.253***	(.048)
Multiple limit*Female							.087	.465***	(.046)
Age	-.001	-.004***	(.000)	-.001	-.008***	(.000)	-.001	-.007***	(.000)
Age squared	.000	-.002***	(.000)	.000	-.002***	(.000)	.000	-.002***	(.000)

**Table 3.** (Continued)

	Model 1			Model 2			Model 3		
	AME	b	SE	AME	b	SE	AME	b	SE
Education level ( <i>Ref: HS diploma</i> )									
Less than a HS diploma	-.175	-.765***	(.010)	-.183	-.801***	(.010)	-.183	-.796***	(.010)
Some college	.013	.063***	(.008)	.015	.073***	(.007)	.014	.069***	(.007)
BA or beyond	.064	.318***	(.009)	.071	.359***	(.008)	.070	.351***	(.008)
Marital status ( <i>Ref: Married</i> )									
Never married	-.018	-.084***	(.009)	-.032	-.150***	(.009)	-.028	-.132***	(.009)
Formerly married	.013	.061***	(.009)	-.003	-.016	(.009)	.000	.001	(.009)
Any children present	-.028	-.132***	(.007)	-.021	-.098***	(.007)	-.022	-.106***	(.007)
Non-Hispanic black	-.032	-.151***	(.010)	-.045	-.208***	(.010)	-.044	-.203***	(.010)
Hispanic	-.003	-.017	(.009)	.002	.008	(.009)	.001	.006	(.009)
State	X			X			X		
Year	X			X			X		
R Squared	.128			.088			.096		
AIC		641,927.9			670,734.3			665,380.2	
BIC		642,696.2			671,502.6			666,238.9	

Source: Current Population Survey, ASEC, 2010–2015, working-age adults 25–61 years old,  $N = 596,199$ .

Notes: Logistic regression models predicting employment. Continuous variables are mean centered. All monetary values appear in 2015 \$USD. AME refers to the average marginal effects of the predictor variables, averaged over the population.

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .

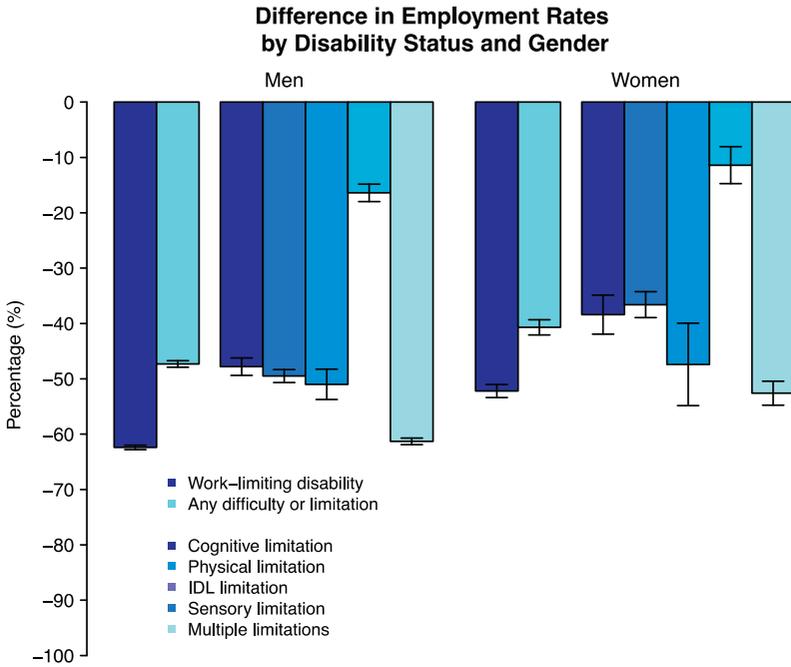


Fig. 1. Percentage Point Difference in Employment Rates by Disability Status and Gender. Notes: Figure presents estimates and 95% confidence intervals based on results from Models 1–3 in Table 3. Estimates for work-limiting disabilities come from Model 1, estimates for any limitation come from Model 2, and estimates for specific limitations come from Model 3. Models include all covariates, making the comparison group persons of the same gender without the specified disability.

smaller gaps than men across different types of limitations with the largest gender gaps present among individuals reporting physical limitations.

Comparing results across models further demonstrates how estimates of disparities vary by gender and with how disability is defined and measured. According to Model 1, men who reported a work-limiting disability had an employment rate that was 62 percentage points lower than otherwise similar men without a work-limiting disability. Women with work-limiting disabilities experienced a smaller employment gap of 52 percentage points when compared to other women. Model 2, however, shows smaller disparities for men and women reporting any difficulties or limitations. The employment rate for men with limitations was 47 percentage points lower than those without, and the rate for women was 41 percentage points lower.

Disaggregating this variable into specific disabilities in Model 3 shows individuals reporting multiple limitations experienced the largest employment

disparities, but those reporting sensory limitations experienced the smallest disparities. For instance, men with multiple disabilities had a rate of employment that was 61% lower than men without these disabilities, and women had a rate of employment that was 53% lower than otherwise similar women without multiple disabilities. Importantly, the majority of people with multiple disabilities also had cognitive limitations, which likely factors into why these gaps were so large. Men with sensory limitations had a rate that was only 16 percentage points lower than men without sensory limitations, and women had a rate that was 11 percentage points lower.

This first set of models demonstrates how rates of employment differ by both gender and disability status. Even though the combined effects of gender and disability placed women with disabilities at the greatest disadvantage, disability presented a stronger association with employment for men. In terms of these within-gender differences, men with work limiting and multiple disabilities experienced some of the largest obstacles to employment, while women with sensory disabilities experienced far smaller disparities. However, disparities were present for people with all types of disabilities, and those who did find employment also continued to face disadvantages within the labor market. These are reflected within earnings differences described below.

### *Earnings*

Table 4 presents results from linear regression models predicting logged annual earnings based on disability status, gender, and a set of control variables. In order to determine how the effects of disability vary by gender, we interact these variables in all models, and we follow the same procedures for incorporating our three disability status variables across models as we did in Table 3. We also present the summary results of these interactions in Fig. 2, which plots the predicted percent difference in annual earnings for men and women with different disabilities.

The results from our earnings models show that disadvantages do indeed continue for employed men and women with disabilities. Like employment, earnings disparities also vary by gender and disability status. Across models in Table 4, women without disabilities earned approximately 33% ( $(\exp(-0.394)-1)*100\% = -32.56$ ) less than otherwise similar men, even after accounting for human capital differences and hours of work.<sup>5</sup> However, the gender earnings gap was smaller among individuals who reported a disability across models. This gap decreased for individuals with work-limiting disabilities in Model 1; women with work-limiting disabilities earned approximately 18% less than men with these disabilities. Among men and women with any difficulty or limitation in Model 2, women earned approximately 28% less, much closer to the gender gap for people without disabilities.

**Table 4.** Results from Regression Models Predicting Logged Annual Earnings by Disability Status and Gender.

	Model 1		Model 2		Model 3	
	b	SE	b	SE	b	SE
Intercept	10.960***	(.004)	10.960***	(.004)	10.960***	(.004)
Work limiting disability	-.381***	(.012)				
Any difficulty or limitation			-.221***	(.009)		
Limitation type ( <i>Ref: No limitation</i> )						
Cognitive limitation					-.402***	(.024)
Physical limitation					-.196***	(.019)
IDL limitation					-.296***	(.053)
Sensory limitation					-.088***	(.013)
Multiple limitations					-.461***	(.021)
Female	-.394***	(.002)	-.393***	(.002)	-.394***	(.002)
<i>Interactions</i>						
Work limiting disability*Female	.133***	(.016)				
Any disability or limitation*Female			.044***	(.013)		
Disability type ( <i>Ref: No disability</i> )						
Cognitive limit*Female					.211***	(.034)
Physical limit*Female					.073**	(.025)
IDL limit*Female					.033	(.073)
Sensory limit*Female					-.026	(.021)
Multiple limit*Female					.134***	(.029)
Age	.007***	(.000)	.007***	(.000)	.007***	(.000)
Age squared	.000***	(.000)	.000***	(.000)	.000***	(.000)
Education level ( <i>Ref: HS diploma</i> )						
Less than a high school diploma	-.303***	(.005)	-.303***	(.005)	-.303***	(.005)
Some college	-.062***	(.003)	-.062***	(.003)	-.063***	(.003)
BA or beyond	.116***	(.003)	.116***	(.003)	.116***	(.003)
Marital status ( <i>Ref: Married</i> )						
Never married	-.131***	(.003)	-.131***	(.003)	-.129***	(.003)
Formerly married	-.064***	(.003)	-.064***	(.003)	-.063***	(.003)
Any children present	.031***	(.002)	.031***	(.002)	.031***	(.002)
Non-Hispanic black	-.140***	(.004)	-.141***	(.004)	-.141***	(.004)
Hispanic	-.169***	(.003)	-.168***	(.003)	-.168***	(.003)
Weeks worked last year	.044***	(.000)	.044***	(.000)	.044***	(.000)
Usual hours worked per week	.013***	(.000)	.013***	(.000)	.013***	(.000)
Government employee	-.007*	(.003)	-.007*	(.003)	-.007*	(.003)

**Table 4.** (Continued)

	Model 1		Model 2		Model 3	
	b	SE	b	SE	b	SE
Firm size ( <i>Ref: 500+ employees</i> )						
<10 employees	-.305***	(.003)	-.305***	(.003)	-.305***	(.003)
10–99 employees	-.138***	(.003)	-.138***	(.003)	-.138***	(.003)
100–499 employees	-.058***	(.003)	-.057***	(.003)	-.057***	(.003)
Major occupation	X		X		X	
State	X		X		X	
Year	X		X		X	
R Squared	.443		.442		.443	
AIC	852,014.6		852,523.1		852,148.6	
BIC	852,889.1		853,397.6		853,110.6	

Source: Current Population Survey, ASEC, 2010–2015, working-age adults 25–61 years old with employment,  $N=413,007$ .

Notes: Linear regression models predicting logged annual earnings from wages and salary. Continuous variables are mean centered. All monetary values appear in 2015 USD.

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ .

These disparities further varied by limitation type in Model 3, which is also reflected in Fig. 2.

As Fig. 2 and Model 1 show, the presence of a disability generally had greater earnings consequences for men than for women. Men who reported a work-limiting disability earned 32% less than otherwise similar men without a work-limiting disability, net of all controls. Women with work-limiting disabilities earned 20% less than women without these disabilities. Model 2, again shows smaller disparities for men and women reporting any difficulties or limitations. Men with limitations earned 17% less than men without, and women earned 15% less than women without limitations.

In terms of disability type in Model 3, men with cognitive or multiple limitations experienced the largest disparities compared to otherwise similar men without these disabilities, earning 33–37% less. Women with multiple disabilities also experienced larger disparities, earning 23% less than otherwise similar women. However, those with only cognitive limitations saw some of the smallest gaps among women. Within women, those with IDL limitations experienced some of the largest disparities linked to disability.

Taken together, these results show that earnings gaps remain for men and women with disabilities who find employment. Both gender and disability were negatively associated with earnings. Disparities were much larger on average for men who reported work-limiting disabilities compared to those who reported any type of limitation, but the difference was not as large for women.

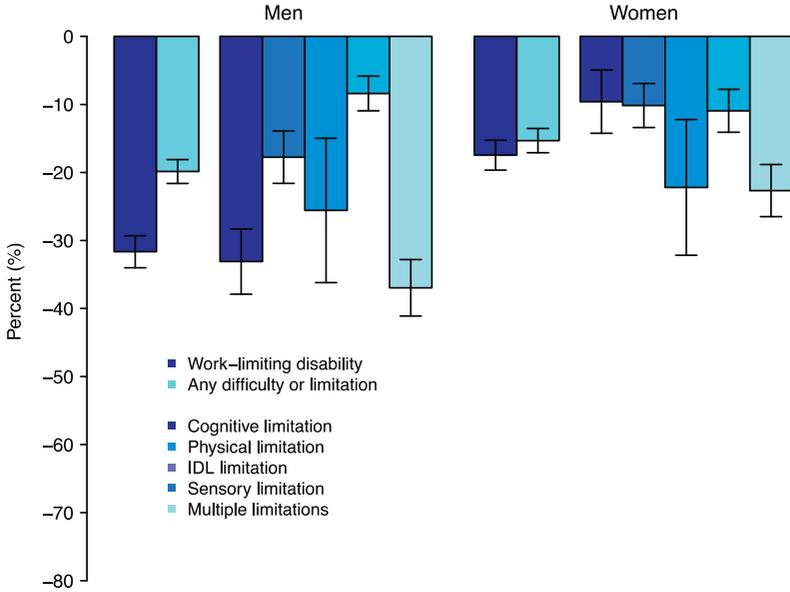


Fig. 2. Percent Difference in Annual Earnings by Disability Status and Gender. Notes: Figure presents estimates and 95% confidence intervals based on results from Models 1–3 in Table 4. Estimates for work-limiting disabilities come from Model 1, estimates for any limitation come from Model 2, and estimates for specific limitations come from Model 3. Models include all covariates, making the comparison group persons of the same gender without the specified disability.

For men, cognitive and multiple limitations showed the largest gaps by specific limitation type. For women, however, IDL and multiple limitations tended to be more problematic. Finally, stronger effects for men resulted in a smaller gender earnings gap among men and women with disabilities.

## DISCUSSION AND CONCLUSION

Sandy Ho, a queer Asian American woman and wheelchair user with osteogenesis imperfecta, is one of the organizers behind the 2016 Disability Intersectionality Summit. She tells the Disability Visibility Project that “Intersectionality means the consideration and acceptance of every facet of a person’s identity, and existence... the point of intersectionality is not just to understand where and how an individual came to their experiences, but the question of ‘why?’ Because when we ask the

question ‘why’ in the context of intersectionality, I think that’s when the excitement, the work, the action, and the justice work begins to fall into place.”<sup>6</sup>

Indeed, scholars have increasingly recognized that disability comprises a heterogeneous group, such that economic outcomes are a function of how disability type interacts with other status characteristics like gender. Based on nationally representative data from the past five years, our results show that labor market outcomes for working-age adults with disabilities are gendered and connected to how disability status is defined and measured. By highlighting how different types of disabilities interact with gender to produce varying degrees of negative labor market outcomes, we document a hierarchy of disadvantage where women with multiple and cognitive disabilities continually have the lowest employment rates and earnings levels (see Hindman, 2011; Conejo, 2013). For instance, when all covariates were held at their means, men without disabilities had an employment rate of 82% and average earnings of \$59,000 per year, but men with multiple disabilities had an employment rate of 17% and average earnings of \$37,000. For women with multiple disabilities, the corresponding employment rates and earnings were 16% and \$29,000, putting them at the very bottom of the hierarchy. Overall, this finding supports previous research demonstrating a double penalty placed on women with disabilities, and it further extends research by incorporating disability type into this hierarchy (Doren & Benz, 2001; O’Hara, 2004).

In addition, our intersectional framework shows that even though women with disabilities face multiple disadvantages in the labor market, disability itself more strongly affects these outcomes for men, as a result of the ways in which gender and disability intersect to shape both supply and demand factors. This finding provides quantitative support for the many qualitative studies that have highlighted the contradictory nature of disability for men in relation to norms of hegemonic masculinity (Gerschick, 2000; Shuttleworth et al., 2012). Because men with disabilities generally faced larger disparities in employment rates and earnings than women with disabilities, this led to smaller gender gaps among people with disabilities.

Finally, in terms of the added effects by disability type, it was the *magnitude* of the effects that differed most across measures, not *the direction* or the *sign* of the relationship. Men and women with work-limiting, multiple, and cognitive disabilities experienced the largest disadvantages within the labor market, but other groups, particularly those with hearing and vision disabilities, saw smaller employment and earnings disparities. This shows that the obstacles and barriers to employment inclusion are not the same for all groups, which may indicate that there are discrete forces affecting individuals in the labor market as a result of the intersection of multiple statuses.

Our study provides more recent quantitative evidence for the multiplicative effects of gender and disability status that shed light on labor market obstacles faced by men and women with different disabilities. Prior studies of labor market inequality and stratification have generally kept the experiences of women

and people with disabilities separate, but our study alludes to how explanations of employment and earnings disparities are shared by these groups, as well as how supply and demand factors might contribute to the double penalty faced by women with disabilities. We also offer support for qualitative studies focused on the contradictions between ideas of masculinity and disability as evidenced by the significantly stronger negative effects of disability on men's employment and earnings. Additionally, by disaggregating disability status and adopting an intersectional framework, we show how gender interacts with different disabilities producing distinct labor market outcomes.

Like other quantitative work on disability economic inequality, our approach faced certain challenges, including measuring disability. As a multidimensional concept (see [Altman, Rasch, & Madans, 2006](#)), definitions of disability have varied widely over the last 40 years (see also [Altman, 2001](#) on disability classification).<sup>7</sup> Traditionally, most labor market surveys have measured disability status with a question regarding the presence of a "work limiting" disability. However, this measure confounds individual and situational factors, which can lead to mis-measurement and incorrect policy implications ([Kirchner, 1996](#)). It likely misses people with very short-term limitations who may not count themselves as having a work-limiting disability ([Burkhouser & Houtenville, 2006](#)), as well as employees who may not indicate that their disability limits working because of effective accommodation ([Altman et al., 2006](#)). For these reasons, we use an expanded measure that incorporates a variety of limitations and we compare our results across measures.

Although we go beyond many studies to include disability type within our models, our intersectional framework was also limited by our focus on only two statuses – gender and disability – when it is likely that multiple other statuses matter within this framework. Not all labor market scholars agree that intersectionality plays a role in shaping employment and earnings outcomes. Some argue that race and gender are two separate systems of stratification ([Cotter, Hermsen, & Vanneman, 1999](#)) while others ([McCall, 2001](#)) suggest they are entirely intersecting. But, our results call for additional research at the intersection of race, class, gender, and disability, although we acknowledge the complexity of incorporating multiple statuses into analyses of labor market outcomes.

Future studies should examine how disability and gender intersect with class and race speaking to what [O'Hara \(2003\)](#) and [Woodhams et al. \(2015\)](#) refer to as "triple jeopardy" and "triple identity disadvantage." Relatedly, gendered disability discrimination excludes women with disabilities from education, health, and social services, which can subsequently perpetuate their marginalization in the labor market. Labor market research points to the role of education in overcoming labor market barriers that not only pertain to specific groups, but also to the intersection of disability status by both gender and race ([Davaki, Marzo, Narminio, & Arvanitidou, 2013](#)). Employers often discuss education as a key human capital variable. However, if pre-employment inequities – that is,

inequalities in access to education and other aspects of human and social capital – disproportionately affect women with disabilities, then it sheds partial light as to why this group struggles in the labor market. In addition, as Tomaskovic-Devey, Thomas, and Johnson (2005) have argued, human capital acquisition is a social process, endogenous to labor markets. This points to aspects of cumulative advantage and disadvantage that span across areas and entire careers (DiPrete & Eirich, 2006).

Our work alludes to several key policy-related implications. As we, and others have noted, pre-labor market inequalities including access to education, human and social capital, and youth work experience (all things women with disabilities are more likely to experience), prove to be a serious obstacle when entering the labor market. Research shows that college education and both specific and general work experience has significant positive effects on labor market outcomes for women with disabilities. High educational attainment may also help both men and women with disabilities break out of occupational ghettos (Maroto & Pettinicchio, 2014b). However, vocational and educational training for people with disabilities may not be keeping up with employers demands limiting access to higher paying occupations (Chan et al., 2010). There may be also important gender inequalities with vocational training where female students are not encouraged or provided training for skilled and higher paying professions (Doren & Benz, 2001).

Finally, disability is often seen and treated differently than other status characteristics like race and gender (Barnartt, 2013). Laws like the Rehabilitation Act and the ADA, rather than the Civil Rights Act, cover disability discrimination perhaps both as an outcome of preconceived notions of disability, but also as the result of policies perpetuating distinctions between statuses. For decades, a system of parallel rights policies has proven to be a challenge not only in enforcement, but also in the way policymakers treat disability vis-à-vis other status characteristics. Not surprisingly, the concept of intersectionality, both in popular accounts and in research, has mostly been confined to the intersection of statuses and identities covered by the same policy legacy – the Civil Rights Act. By extending an intersectional framework to include disability, researchers can expand their understandings of how intersecting statuses that transcend legislative boundaries continue to shape economic inequality.

As Ho alluded, thinking more about how disability intersects with other status characteristics actually sheds light on *why* those intersections generate inequalities as well as how policy mechanisms can seek to mitigate those. Why is there significant variation in how people with disabilities bring forth intersectional claims of discrimination? Why do complaints vary by sector and why are intersectional claims less likely to result in victory (see Best, Edleman, Krieger, & Eliason, 2011; Shaw et al., 2012)? These questions point to the importance of shedding more light on persistent economic inequalities confronting men and women with disabilities.

## NOTES

1. Note that [Acemoglu and Angrist \(2001\)](#) were interested in the potential unintended consequences of disability antidiscrimination legislation on economic outcomes. They found no effect of antidiscrimination law on disabled women's wages but did find declining wages in men.

2. In light of disagreements regarding the use of intersectionality in quantitative research, we use this term broadly to highlight the importance of bringing disability and gender together in such studies ([Davis, 2008](#); [McCall, 2005](#)). A stronger intersectional approach would incorporate race and class as well, but due to the smaller number of respondents with certain disabilities, we were hesitant to incorporate additional interactions with these factors.

3. Cognitive difficulties include those related to learning, remembering, concentrating, or making decisions. Ambulatory difficulties include anything that limits a respondent in one or more basic physical activities. Independent living difficulties indicate the presence of any condition lasting six months or more that makes it "difficult or impossible to perform basic activities outside the home alone." Self-care difficulties include personal needs, such as bathing and dressing. Vision difficulties indicate whether the respondent was blind or had serious difficulty seeing even with corrective lenses. Finally, hearing difficulties indicate whether the respondent was deaf or had serious difficulty hearing.

4. Due to the small number of persons with independent living or self-care disabilities and the overlap across these groups, we combine these groups into a single category. We also combine vision and hearing difficulties into a single category. This results in a variable with six mutually exclusive categories.

5. Because many of these coefficients exceed 0.1, we use the following formula to determine the percent change in net worth for a one-unit change in each predictor variable:  $\% \Delta(y) = 100 * (e^b - 1)$  ([Wooldridge, 2009](#)).

6. <https://disabilityvisibilityproject.com/2016/06/14/disability-intersectionality-summit-interview-w-sandy-ho/>

7. For instance, [Haveman and Wolfe \(1990\)](#) used two measures of disability – the presence of self-reported work limitations and the meeting of official disability-determination standards reflected in the receipt of public disability transfer benefits. [Lewis and Allee's \(1992\)](#) study of federal government employment also incorporated multiple measures – self-reports of disability, if disability was counted by the EEOC, and the nature of the disability. [Robert and Harlan \(2006\)](#) followed a similar approach in their study of government employees using the ADA definition and "the leading causes" of disability as their measure. Finally, UK-based studies like that of [Bambra and Pope \(2007\)](#) used a broader definition of "any long standing illness or disability that has limited activity" which presumably can include activities other than work.

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