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Article

Work disability in the United States, 1968–2015: Prevalence, duration, recovery, and trends

James N. Laditka, Sarah B. Laditka*

Department of Public Health Sciences, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, NC 28223, United States

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ABSTRACT

The United States workforce is aging. At the same time more people have chronic conditions, for longer periods. Given these trends the importance of work disability, physical or nervous problems that limit a person's type or amount of work, is increasing. No research has examined transitions among multiple levels of work disability, recovery from work disability, or trends. Limited research has focused on work disability among African Americans and Hispanics, or separately for women and men. We examined these areas using data from 30,563 adults in the 1968–2015 Panel Study of Income Dynamics. We estimated annual probabilities of work disability, recovery, and death with multinomial logistic Markov models. Microsimulations accounting for age and education estimated outcomes for African American, Hispanic, and non-Hispanic white women and men. Results from these nationally representative data suggested that the majority of Americans experience work disability during working life. Most spells ended with recovery or reduced severity. Among women, African Americans and Hispanics had less moderate and severe work disability than whites. Among men, African Americans became severely work disabled more often than whites, recovered from severe spells more often and had shorter severe spells, yet had more severe work disability at age 65. Hispanic men were more likely to report at least one spell of severe work disability than whites; they also had substantially more recovery from severe work disability, and a lower percentage of working years with work disability. Among African Americans and Hispanics, men were considerably more likely than women to have severe work disability at age 65. Work disability declined significantly across the study period for all groups. Although work disability has declined over several decades, it remains common. Results suggest that the majority of work disability spells end with recovery, underscoring the importance of rehabilitation and workplace accommodation.

1. Introduction

A nation's economic well-being depends on the health of its population. When people leave work due to health limitations, employers lose their knowledge, skills, and experience, losses that are becoming increasingly important as our population ages (Buchmueller & Valletta, 2017; Pransky et al., 2016). People who become unemployed due to disabilities often lose not only income, but also confidence, prestige, and social capital, making it more difficult for them to become re-employed (Berchick, Gallo, Maralani, & Kasl, 2012; Kalousova & Burgard, 2014). Even after recovery from work disability, lifetime opportunity for career advancement and increasing income may be reduced permanently (Breslin et al., 2007). Thus, limitations in the ability to work due to disabling physical, emotional, or mental conditions have important consequences for individuals and society.

Workforce aging in the United States has prompted growing interest in work disability (Buchmueller & Valletta, 2017; Jette & Badley, 2000; Mathiowetz, 2000; Pransky et al., 2016). By 2020 more than one-quarter of the United States workforce will be age 55 or older (Toossi, 2012). Chronic health conditions associated with functional impairments that can limit work, particularly diabetes and obesity, have become increasingly prevalent at all adult ages (Buchmueller & Valletta, 2017; Martin, Freedman, Schoeni, & Andreski, 2010; Pransky et al., 2016). More than 40% of working age adults have at least one chronic condition (Buchmueller & Valletta, 2017; Ward, 2015); over 20% have two or more. These chronic conditions increase the risks of having functional limitations and work disability (Buchmueller & Valletta, 2017; Clarke & Latham, 2014; J.N. Laditka & Laditka, 2016c; Pransky et al., 2016; Ward, 2015). Nearly 55% of adults in the United States reported having a work disability at least once from age 25 to 60; about one-quarter reported having a severe work disability at least once at those ages (Rank & Hirschl, 2014). From 2000 to 2010, there was a large increase in participation in the Social Security Disability Insurance (SSDI) program for people with permanent work disability,

* Corresponding author.
E-mail addresses: jladitka@uncc.edu (J.N. Laditka), sladitka@uncc.edu (S.B. Laditka).

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followed by slower growth through 2015 (Buchmueller & Valletta, 2017), possibly associated with increased use of prescription pain medication (Case & Deaton, 2015).

Workplace accommodations, medical care, and other developments may help to limit work disability. The Rehabilitation Act of 1973 and state laws increased accommodations for employees with disabilities during the 1970s and 1980s. The 1990 Americans with Disabilities Act (ADA) and the ADA Amendments Act of 2008 addressed discrimination affecting a broad range of workers with disabilities, although some researchers suggest that the effects were modest (Burkhauser, Schmelser, & Weathers, 2011). Over the last several decades, increased access to health care and improved treatment of high blood pressure and heart disease may have reduced work disability (Sommers, Maylone, Blendon, Orav, & Epstein, 2017). Assistive devices improved during that period, and more people with functional impairments used them (Agree, 2014; Freedman, Kasper, & Spillman, 2017). These changes may help more Americans to work despite functional limitations that often accompany aging and chronic diseases. Notwithstanding these positive trends many Americans have work disabilities.

Work disability may affect some population groups more than others. African Americans have more chronic disease and functional impairment than non-Hispanic whites (hereafter whites), and a higher percentage of life with disability (Geronimus, Bound, Waidmann, Colen, & Steffick, 2001; Hayward & Heron, 1999; J.N. Laditka & Laditka, 2014; S.B. Laditka & Laditka, 2009, 2014, 2015; Levine & Crimmins, 2014; Sautter, Thomas, Dupre, & George, 2012). Studies suggest that although Hispanics live longer than whites they have more functional impairment (Angel, Angel, & Hill, 2014; Hayward, Hummer, Chiu, González-González, & Wong, 2014; Hummer & Hayward, 2015). Higher disability rates among Hispanics may be due to limited education, which is associated with less occupational opportunity and with high risk work such as meat processing, construction, cleaning, and domestic service (Hummer & Hayward, 2015), and also to lifetime effects of childhood adversity, which may be more common among Hispanics than among African Americans or whites (J.N. Laditka & Laditka, 2017). The work force in the United States is increasingly ethnically diverse: by 2024, 20% will be Hispanic (Buchmueller & Valletta, 2017). On average, Hispanics have more obesity, high blood pressure, and diabetes than non-Hispanic whites, and therefore greater risks of functional impairment (Buchmueller & Valletta, 2017). Little is known about whether health disparities affecting African Americans and Hispanics extend to work disability.

1.1. Work disability – a conceptual framework

The Social Security disability program defines work disability as a "medical condition [that] must significantly limit your ability to do basic work activities — such as lifting, standing, walking, sitting, and remembering — for at least 12 months" (Social Security Administration, 2017). More broadly, work disability is often defined by self-reports of physical, emotional, or mental conditions that make it impossible to work, or limit the type or amount of work a person can do (Burkhauser, Daly, Houtenville, & Nargis, 2002; Clarke & Latham, 2014; Jette & Badley, 2000). Consistent with definitions of disability by Nagi (1991) and the World Health Organization's International Classification of Functioning, Disability and Health (ICF) (WHO, 2017), Jette and Badley (2000) describe a theory of work disability emphasizing limitations in performing socially defined roles and tasks, where disability and the ability to work cannot be determined solely by a diagnosis or an assessment of physical functioning. Factors linked to work disability include job characteristics that contribute to declining functioning and health or promote an individual's ability to perform required tasks, physical factors of the environment such as climate, terrain, or building design, and perceptions of the social context of work and the degree to which that context limits work for individuals with physical, emotional, or mental limitations (Jette & Badley, 2000; Pransky et al., 2016; WHO, 2017). Thus, of any two individuals with similar functional limitations, one may experience and report a severe work disability while the other reports a moderate work disability, or no work disability, due to differing perceptions or contexts including perceptions about the adequacy of workplace accommodations. Work disability is a useful summary indicator that assesses not only physical, emotional, or mental barriers to work but also the degree to which the workplace accommodates health limitations. Thus, work disability is more closely aligned with the ICF than measures that have been used more commonly to study disability, such as impairment in activities of daily living.

1.2. Study contributions and hypotheses

Given the importance of work disability for individuals and families, employers, governments, and society it is useful to better understand the dynamics of work disability. From the perspective of rehabilitation, it is useful to estimate recovery from work disability. We studied work disability from ages 20 through 65 using more than 45 years of data from a nationally representative sample. We estimated the prevalence of work disability at all adult working ages and the dynamics of recovery from work disability.

No research has focused on work disability among African Americans or Hispanics. Given the evidence of greater functional impairment among these populations (e.g., Hayward & Heron, 1999; Hummer & Hayward, 2015), we hypothesized that African Americans and Hispanics would have more moderate and severe work disability than whites.

It is well established that women have more functional impairment than men (e.g., S.B. Laditka & Laditka, 2009). Although little research has examined whether that pattern applies to work disability, we hypothesized that women would have more moderate and severe work disability than men.

Our analysis is the first to examine temporal trends in work disability by sex and race/ethnicity. Given the intended broad impact of the ADA and related laws, improvements in medical care and pharmaceutical treatments, and increased use of assistive devices, we hypothesized that work disability declined over the last quarter-century.

2. Materials and methods

2.1. Data source and study sample

We used data from the Panel Study of Income Dynamics (PSID), the longest-running household panel survey in the world. The PSID interviewed participants annually from 1968 through 1997, and every two years since then. The study maintains national representativeness by continuously following children, ex-spouses, and other adults of sampled households who form new households (Fitzgerald, 2011; McGonagle, Schoeni, Sastry, & Freedman, 2013). Co-residents of new households are included. Response rates were 76% and 88.5% in 1968 and 1969, respectively, and have ranged from 96% to 98% since then (Schoeni, Stafford, McGonagle, & Andreski, 2013).

We followed adults through 39 survey waves, from 1968 through 2015. Across all waves the PSID included 40,295 individuals who were designated as household heads or their spouses or partners in at least one wave. By the convention established in 1968, men were in most cases designated as the household heads when present. Our analysis focuses on those household heads and their spouses or partners. We excluded those who did not report work disability status in at least two survey waves (n = 7795), resulting in a sample of n = 32,500; 85.1% of participants excluded for this reason had longitudinal sampling weight values of zero. We also excluded 1937 participants who reported race or ethnicity other than African American, Hispanic, or white due to their few deaths, which are needed to estimate the models for this research, resulting in a final analytic sample of n = 30,563. Participants