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Physical Disability at Work: How Functional Limitation Affects Perceived Discrimination and Interpersonal Relationships in the Workplace

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Abstract

Adults with disability have significantly lower rates of labor force participation relative to persons without disability, although it is unclear whether this disparity extends to subjective workplace experiences. Using data from the 2004 to 2006 wave of the National Survey of Midlife Development in the United States (n =2,030), we evaluate: (1) whether U.S. workers with physical disability report higher levels of perceived job discrimination and unequal workplace opportunities and lower levels of supervisor and coworker support and (2) whether these patterns differ by sex, age, and occupation group. We find that workers with physical disability fare significantly worse on all four outcomes net of covariates. Disability takes a particularly large toll on men's perceived workplace opportunities and white-collar employees' relationships with coworkers. Young adult workers (ages 30–39) with disability report significantly more support from their supervisor relative to their counterparts without disability. We discuss implications for research and policy.

Keywords

disability, employment, perceived discrimination, workplace relationships

Physical disability refers to a physical condition that limits one's capacity to engage in activities in any domain of life, from work to recreation (Verbrugge and Jette 1994). More than 60 million working-age adults in the United States report at least some difficulty with physical functioning, such as walking or lifting (Centers for Disease Control and Prevention 2020). Rates of disability among working-age adults have increased in recent years, raising concerns about the short- and long-term consequences for their economic well-being (Joffe-Walt 2013; Shandra 2018). One-quarter of all U.S. nonworkers ages 20 to 64 cite disability as their main reason for not working (Dalirazar 2007). In 2018, just 21% of working-age persons with any type of disability were in the labor force, compared with 69% of those without disability (Bureau of Labor Statistics 2020).

The link between disability and labor force participation is well documented, but less is known about the everyday working lives of employed persons with physical disability. Employment is a

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potentially important source of purpose and social integration for adults with disability, who may be isolated from other forms of engagement due to physical or environmental barriers (Vornholt, Uitdewilligen, and Nijhuis 2013). Studies based on national survey data show that persons with functional limitations are at heightened risk of institutional discrimination, including being fired or not given a promotion (Namkung and Carr 2019). Focus group interviews find that workers with disability say they are treated like "second-class citizens" and that their intelligence and skills are underestimated (Keller and Galgay 2010:249–50). However, we know of no national population-based studies examining how physical disability affects everyday aspects of work, including relationships with coworkers and supervisor and perceptions of inequitable and discriminatory treatment, and whether these patterns are conditioned by other personal characteristics like one's gender, age, or occupation.

We use data from the 2004 to 2006 wave of the Midlife in the United States (MIDUS) survey (n = 2,030) to explore whether employed persons with (vs. without) physical disability differ regarding four conceptually and statistically distinct workplace experiences: perceived job discrimination, perceived unequal opportunities, support from coworkers, and support from supervisor. We further examine whether these associations differ on the basis of one's sex, age, and occupational group, recognizing that the expectations placed on workers and their susceptibility to stigmatization (or support) may reflect their other social locations (Dick-Mosher 2015). Understanding whether, how, and for whom disability undermines everyday work experiences is an important concern. Perceived workplace stigmatization, blocked opportunities, and inadequate coworker support may amplify the economic, physical, and emotional strains already experienced by persons with disability, contributing to cumulative disadvantage processes over the life course (Hatzenbuehler, Phelan, and Link 2013; Shandra 2018).

BACKGROUND

The Americans with Disability Act (ADA), passed by Congress in 1990 and amended in 2008, prohibits discrimination on the basis of disability in employment, including hiring and firing. Employers are required to provide "reasonable accommodations" to qualified workers with a disability. ADA is based on a broad definition of disability, covering both mental and physical conditions; a condition need not be permanent or severe to qualify an individual for accommodations (Jasper 2008). Despite ADA protections, workers with activity-limiting health conditions—even relatively minor ones such as back problems or controlled diabetes—are vulnerable to discriminatory and unequal treatment (McMahon and Shaw 2005). Workers with disability earn less, receive less training and benefits, are less likely to participate in decision-making, and are more likely to be clustered in lower-skilled jobs with few opportunities for autonomy relative to workers without disability (R. L. Brown and Moloney 2019; Kaye 2010; Maroto and Pettinicchio 2014; Schur et al. 2009).

The objective employment conditions of workers with disability are well documented, yet few studies have explored other subtle and potentially pervasive forms of stigmatization and ableism. Stigma refers to any personal attribute that is "deeply discrediting" to its possessors (Goffman 1963:3). Persons with disabilities, whether physical or mental, visible or invisible, are arguably "disqualified from full social acceptance" because others may see them as not fully capable of carrying out expected social roles (Goffman 1963:3). Especially in Western capitalist societies where being able-bodied is viewed as a marker of competence, vigor, and capacity to work, persons with disability may be viewed as possessing a "blemish of individual character"—a malingerer who is faking or exaggerating symptoms to evade work responsibilities (Goffman 1963:3; Lingsom 2008). Stigmatization processes may be interpersonal, occurring in everyday exchanges between stigmatized and nonstigmatized individuals, or structural, encompassing institutional policies and practices that "either intentionally restrict the opportunities of stigmatized individuals or unintentionally yield consequences for them" (Hatzenbuehler 2016:743). Importantly, the stigmatization of persons with a culturally devalued attribute like disability is perpetuated by the actions of social institutions and individuals who denigrate and exclude. Such actions might include limiting access to rewarding and lucrative job opportunities or contributing actively or passively to a culture of bullying and disrespect.

We focus on two aspects of work life that may be compromised by interpersonal and structural stigma processes, respectively: workplace relationships and perceived workplace opportunities. Strained or unsupportive relationships with colleagues and perceived lack of opportunities for advancement consistently rank among the main reasons why employees leave their jobs (Eisenberger et al. 2002).

Finding a new job commensurate with one's skills is particularly difficult for persons with disability, especially during periods of economic downturn, potentially widening economic disparities on the basis of disability status (Kaye 2010; Shandra 2018). Strained relationships, disrespectful treatment, and blocked opportunity structures also are sources of work stress that may further undermine workers' psychological and physical well-being (Namkung and Carr 2020; Ryff, Keyes, and Hughes 2003).

Thus, our first aim is to evaluate the extent to which persons with physical disability differ from those without regarding four subjective work experiences. Two dimensions capture perceptions regarding one's status and opportunities at work: *Perceived job discrimination* encompasses stigmatizing treatment, such as being ignored or given jobs that no one else wants, and *perceived inequality* refers to having fewer structural opportunities and more obstacles than one's peers. Two dimensions capture interpersonal relationships: *perceived support from coworkers* and *supervisor*. We consider each relationship separately because the former is a potential source of peer support and social integration, whereas the latter also may entail advocacy for reasonable accommodations (Schur et al. 2009).

Subgroup Differences in the Impact of Disability on Workplace Experiences

Our second aim is to evaluate the extent to which the association between disability and stigmatizing workplace experiences varies based on one's gender, age, and occupational group. Disability diminishes individuals' "abilities to act in necessary, usual, [and] expected . . . ways" (Verbrugge and Jette 1994:3). The expectations placed on workers may vary based on their other social locations, which may either amplify or weaken the association between disability and stigmatizing workplace experiences. Research carried out in the intersectionality tradition documents that persons who belong to two or more subgroups that historically have been devalued—most notably black individuals and women—may experience multiplicative negative consequences of these overlapping identities, a process described as "double jeopardy" (Purdie-Vaughns and Eibach 2088:1). For example, women with disabilities have lower rates of labor force participation, lower income, higher poverty rates, and a lower likelihood of doing autonomous or self-directed work relative to their nondisabled female counterparts and men, regardless of disability status (R. L. Brown and Moloney 2019; Pettinicchio and Maroto 2017). These labor market penalties are even more pronounced for black women with disabilities relative to their white counterparts (Maroto, Pettinicchio, and Patterson 2019). This research powerfully reveals how sexism, ableism, and racism intersect to undermine objective conditions of disabled women's work.[1]

It is unclear whether comparable double jeopardy processes affect subjective aspects of employment, including structural and interpersonal stigmatization.[2] We propose that the extent to which sex, age, and occupational group intensify (or mitigate) the effects of disability may vary across our four study outcomes. For example, a woman with disability may be perceived by colleagues as less competent at her job, given dominant cultural norms that devalue female and disabled workers (Hatzenbuehler 2016). This double jeopardy imposed by sexism and ableism, in turn, may erode her prospects for career advancement. Thus, we anticipate that women with disability will report more frequent discrimination and perceived inequality relative to their male counterparts and relative to women without disability. However, women with disability also may perceive high levels of emotional support from coworkers or supervisors; ironically, the lowered expectations that individuals hold for women with disability may be accompanied by an "overprotectedness" that is experienced as emotional support (Sanders 2006). We expect that women with physical disability may report more support from their coworkers and supervisors relative to their male counterparts because their overlapping identities associated with weakness or dependence may engender support and overprotectedness (Sanders 2006).

We further expect that physical disability will engender greater interpersonal stigmatization of younger rather than older workers because it violates expectations regarding active and independent "able-bodied" young adults (McPherson 1994). Because functional limitation is less common among young (ages 30–39) and early-midlife (ages 40–49) persons relative to late-midlife persons (ages 50–64), it may be a more salient personal characteristic that strains relationships with colleagues (Namkung and Carr 2020). However, given well-documented ageism against older workers, especially with respect to promotions, we expect that older workers with disability will report higher levels of perceived inequalities relative to their younger counterparts (Roscigno et al. 2007).

Finally, we expect that disability will be linked with higher levels of perceived discrimination and blocked opportunities among lower-white-collar and blue-collar workers relative to their upper-white-collar professional counterparts. The former two occupational groups are more likely to require physically demanding work and typically have shorter career ladders and thus fewer opportunities for advancement relative to professional occupations (Kalleberg 2011). As such, service and blue-collar workers with physical disability may be viewed as less capable of carrying out tasks associated with their position and may have especially low chances of advancement in a context where such opportunities are relatively few.

However, we expect that nonprofessional workers with disability may have more supportive relationships with their coworkers and supervisor relative to their counterparts in professional occupations. Disability is socially patterned such that rates are higher among persons with lower levels of education and lower-status occupations (Kaye 2010). Consequently, functional limitations are more common, expected, and accepted. Moreover, workers in nonprofessional jobs may have family and friends with disability because social relationships tend to be homogamous on the basis of social class (Wright and Cho 1992). Workers who are closely acquainted with persons possessing stigmatized attributes are described by Goffman (1963) as "wise" persons who may be either more accepting of those who are stigmatized or less accepting because they seek to distance themselves from the stigmatized person. Limited empirical assessments suggest that wise persons are less likely to demean and more likely to accept a person with the devalued attribute (Markowitz and Engelman 2017).

Other Influences on Disability and Workplace Experiences

We adjust all multivariate analyses for demographic, health, and psychosocial factors that may confound associations between disability and perceived work experiences. Persons from socially and economically disadvantaged groups, including women, ethnic minorities, and persons of lower socioeconomic status (SES), are especially vulnerable to physical disability (R. T. Brown et al. 2017; Krahn, Walker, and Correa-De-Araujo 2015), interpersonal and institutional discrimination (Kessler, Mickelson, and Williams 1999), and constrained opportunities for career advancement (Hodson and Sullivan 2012). We control for body mass index (BMI) and chronic physical health conditions given that they are associated with elevated disability risk (Krahn et al. 2015), workplace discrimination (Carr and Friedman 2005; Kessler et al. 1999), and compromised interpersonal relationships (Carr and Friedman 2006). We also adjust for negative affect, which may render one especially vulnerable to and cognizant of unpleasant workplace conditions (Milam, Spitzmueller, and Penney 2009). Finally, we control for whether one has a mental health disorder (e.g., major depression) given high rates of comorbidity among mental and physical health conditions that underlie disability (Egede 2007) and the stigmatization of workers with mental illness (Brohan and Thornicroft 2010).

DATA AND METHODS

Data

Analyses were based on data from the second wave of the National Survey of Midlife in the United States (MIDUS II) conducted between 2004 and 2006. MIDUS is a national longitudinal study started in 1995 among more than 7,000 noninstitutionalized adults ages 25 to 74. Retention rates at the second wave were higher among women, whites, married people, and people with more education and better health, with a 75% overall participation rate adjusted for mortality (Radler and Ryff 2010). We used data from the second wave only. The first wave (MIDUS I) was collected 10 years earlier; thus, a prospective exploration of disability status at one wave and current workplace experience a decade later would raise significant concerns given the instability of functioning over such a long period (Lin and Kelley-Moore 2017). A third wave, collected in 2013 to 2015, was available and would have enabled us to explore more recent patterns; however, roughly 27% of the MIDUS II had attrited by MIDUS III, with this proportion significantly higher among those with versus without disability in Wave 2 (33% vs. 23%). Additionally, no MIDUS III participants were under age 40, weakening our capacity to secure a large enough analytic sample for working-age adults. A refresher cohort, comprising younger adults, is available, yet only a single wave of data has been collected thus far.

MIDUS II comprises 4,041 respondents who completed a telephone interview and self-administered questionnaire. Our analytic sample was limited to employed persons ages 30 to 64 (n = 2,775). Those who were not working for pay (n = 612), refused to report their working status (n = 53), worked less than four weeks in the 12 months prior to interview

(n = 46), or refused to report their number of weeks worked for the past 12 months (n = 34) were excluded because of their lack of data on workplace experiences. Our final analytic sample included 2,030 adults who worked for pay (including self-employment and temporary leave) and had worked at least four weeks for the past 12 months. Compared to our analytic sample, working-age adults excluded from the sample were significantly older (mean age was 52 vs. 50) and more likely to have been female (66% vs. 51%). The proportion of working-age adults with physical disability was significantly higher among those excluded from our analytic sample (53% vs. 36%); thus, our sample was overrepresentative of persons whose disability still enables them to work for pay. To address concerns that persons in our analytic sample were positively selected on the basis of health, workplace experiences, or other potential sources of bias, we carried out supplemental analyses on all persons ages 30 to 64 (n = 2,775) to explore associations between physical disability and reports of institutional discrimination that prevented one from working for pay (see Appendix Table 6 in the online version of the article).

Measures

Dependent variables. *Perceived job discrimination* (α = .71) referred to how often a respondent had experienced the following: (a) unfairly given jobs no one else wanted, (b) watched more closely at job than others, (c) ignored or not taken seriously by boss, and (d) coworker with less experience and qualifications promoted before them. Response options included never, less than once a year, a few times a year, a few times a month, and once a week or more. Responses were averaged; scores ranged from 1 to 5, where 5 reflected more frequent perceived job discrimination (Chou and Choi 2011). The original MIDUS scale included two additional items, how often a respondent's boss used ethnic/racial/sexual slurs and how often coworkers used ethnic/racial/sexual slurs (six-item scale, α = .74). However, we dropped these two items due to their weaker correlations with other items ($r \leq .30$) and because the remaining four items were more conceptually relevant for our examination of disability-related discrimination. Supplemental bivariate and multivariate analyses yielded comparable results for the four- and six-item scales (results available from authors).

Perceived inequality at work (α = .77) referred to one's level of agreement with five statements about their current job: (a) "I feel cheated about the chances I have had to work at good jobs"; (b) "When I think about the work I do on my job, I feel a good deal of pride"; (c) "I feel that others respect the work I do on my job"; (d) "Most people have more rewarding jobs than I do" (reverse-coded); and (e) "When it comes to my work life, I've had opportunities that are as good as most people's." Responses were measured from 1 (a lot) to 4 (not at all) and were averaged, with higher scores indicating higher levels of perceived inequality (Ryff et al. 2003).

Perceived support from coworkers (α = .66) comprised two items: how often a respondent felt that they (a) got help and support from coworkers and (b) were listened to by coworkers about work-related problems. *Perceived support from supervisors* (α = .86) comprised three items asking how often one (a) got information he or she needs from supervisors, (b) got help and support from immediate supervisors, and (c) was listened to by supervisors about work-related problems. Responses ranged from 1 (never) to 5 (all of the time) and were averaged; higher values indicated higher levels of perceived support (Taylor 2010). Zero-order correlations among the four outcomes ranged from –.28 (perceived discrimination and support from coworker) to .47 (perceived discrimination and inequality), suggesting that each represents a conceptually and statistically distinct aspect of one's work experiences. Finally, we conducted supplemental analyses on the full sample comprising both working and nonworking adults to address potential sources of bias in the analytic sample; we assessed whether a respondent had been: not hired for a job, not given a job promotion, or fired due to a personal characteristic (Kessler et al. 1999).

Independent variable. *Physical disability* was assessed in the self-administered questionnaire with items adapted from the 36-Item Short Form Health Survey capturing difficulty with nine activities of daily living (Ware and Sherbourne 1992). Participants were asked, "How much does your health limit you in doing each of the following: lifting or carrying groceries; bathing or dressing yourself; climbing several flights of stairs; bending, kneeling, or stooping; walking more than a mile; walking several blocks; walking one block; vigorous activity (e.g., lifting heavy objects); and moderate activity (e.g., vacuuming)?" Response categories were: not at all, a little, some, and a lot. We classified participants as having physical disability if they reported at least some difficulty on any of the nine items,

consistent with previous MIDUS analyses (Friedman 2016; Namkung and Carr 2019). Slightly more than one-third of the sample (36%, n = 722) met this criterion. The most common limitation reported was vigorous activity (88%), followed by kneeling, bending, or stooping (38%) and walking a mile (35%).

We conducted sensitivity analyses using a more stringent criterion in which we classified working adults as having a disability if they indicated a lot of difficulty on any of the nine items, consistent with studies using surveys other than MIDUS (Wong et al. 2015). Under this definition, 16% of the sample (n = 330) were classified as having physical disability. The results based on this more restrictive measure were similar in magnitude and significance to the ones from the models using the broader measure of at least some difficulties. We focused on the broader measure because these models yielded a superior model fit and provided a larger subsample for testing whether effects of physical disability are moderated by sex, age, and occupational group (complete models available from authors).

Moderating variables. We evaluated whether the effects of disability differ on the basis of gender, age, and occupational group. *Gender* referred to whether one identified as female or male. We recoded *age* into the categories of young adulthood (ages 30–39), early midlife (ages 40–49), and late midlife (ages 50–64), consistent with earlier studies of physical disability over the life course (Namkung and Carr 2019). For *occupational group*, we recoded one's three-digit census occupational code into three broad categories: upper white-collar (professional, executive, and managerial occupations), lower white-collar (sales and clerical occupations), and blue-collar (crafts, operatives, labor, farm, and military), consistent with prior studies of occupations and health in the United States (e.g., Fernandez et al. 2017).

Control variables. All analyses were adjusted for three additional demographic and socioeconomic characteristics: race-ethnicity (1 = racial or ethnic minority; 0 = non-Hispanic white), current marital status (1 = currently married; 0 = unmarried), and education (less than high school, high school graduate [reference group], some college, college graduate or higher). We also included two dimensions of physical health. BMI was calculated from participants' self-reported height and weight and was classified into four categories (underweight/normal [reference], overweight, obese, refusal/don't know; National Heart, Lung, and Blood Institute 1998). Underweight status (i.e., BMI <18.5) was not associated with our study outcomes, so we combined this very small category with normal weight. Presence of a serious medical condition (1 = yes; 0 = no) referred to whether one had experienced or been treated for any of 27 medical conditions in the past 12 months (e.g., asthma, hypertension).

Finally, two dimensions of mental health were included. Presence of a clinically significant mental health disorder (1 = yes; 0 = no) referred to whether one was diagnosed with any of five conditions (major depression, generalized anxiety disorder, panic disorder, and alcohol and drug dependence) in the year prior to interview (Kessler et al. 1999). Major depression, anxiety, and panic disorders were assessed during the phone interview with items from the Composite International Diagnostic Interview Short Form, based on criteria specified in the American Psychiatric Association's (1987) *Diagnostic and Statistical Manual of Mental Disorders*, third edition–revised. Alcohol and drug dependence assessments were based on the fourth edition criteria of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association 1994). Negative affect (α = .87) was measured with a subset of items from the Positive-Negative Affect Scale: "During the past 30 days, how much of the time did you feel: (a) so sad nothing could cheer you up; (b) nervous; (c) restless or fidgety; (d) hopeless; (e) that everything was an effort; and (f) worthless." Responses ranged from 1 (none) to 5 (all the time) and were averaged such that higher scores reflect more frequent negative affect (Kessler et al. 1999). Item-specific missing data were less than 1% across all covariates, except body weight, which was 4.6%. We indicated these cases with a "weight missing" dichotomous variable because refusal to report one's weight is correlated with more frequent reports of perceived discrimination relative to normal weight persons (Carr and Friedman 2005).

Analytic Plan

We first conducted bivariate analyses comparing workplace experiences and all covariates by physical disability status; we conducted *t* tests for continuous measures and chi-square tests for categorical variables. Second, we estimated ordinary least squares (OLS) regression models to assess associations of physical disability with the four workplace outcomes. We estimated nested regression models to evaluate the extent to which an association with disability was accounted for by each block of

covariates. Model 1 presents unadjusted associations between disability and workplace experiences. Model 2 incorporates demographic characteristics, Model 3 further includes socioeconomic characteristics, Model 4 adds in BMI and presence of a medical condition, and Model 5 incorporates the two mental health indicators. Third, we tested interaction effects to evaluate whether the associations between physical disability and workplace experiences were moderated by age, sex, and occupational group net of covariates. Finally, as a supplementary analysis, we focused on all persons ages 30 to 64 regardless of employment status and estimated the odds of work-related institutional discrimination to understand how discriminatory hiring or retention practices may impede employment among persons with disability. Analyses were conducted using STATA 16.

RESULTS

Bivariate Analysis

Table 1 shows that 36% of the analytic sample reported at least some difficulty carrying out daily physical activities. Persons with disability are overrepresented among later-midlife adults (ages 50–64), women, and unmarried persons. A socioeconomic gradient is evident such that working adults with physical disability are less likely to have a college degree and more likely to hold a lower-white-collar job relative to those without disabilities. Physical disability is linked to body weight; 40% of persons with disabilities (vs. 20% of persons without) are classified as obese. They also are more likely to report a medical condition in the past 12 months (82% vs. 61%). Specifically, persons with disability are more likely to report 22 of the 27 health conditions included in the aggregated measure, except tuberculosis, bladder trouble, varicose veins, and AIDS/HIV infection, which are diagnosed for less than 1% of the total sample, as well as the more common condition of hay fever (not shown; full results available from authors). Persons with physical disability also are more likely to report a mental health disorder (21% vs. 14%) and higher levels of negative affect (1.62 vs. 1.32, $p < .001$).

Workers with physical disability report more frequent encounters of discriminatory treatment (M = 2.00 vs. 1.79, $p < .001$), higher levels of perceived inequality (M = 1.66 vs. 1.54, $p < .001$), and lower levels of support from their coworkers (M = 3.51 vs. 3.68, $p < .001$) and supervisors (M = 3.48 vs. 3.63, $p < .001$). Supplemental descriptive analyses find that women report more supportive workplace relationships than men and that late-midlife workers report less discrimination and perceived inequality relative to younger workers (see Appendix Table 1 in the online version of the article).

Multivariable Analysis

Physical disability and workplace experiences. OLS regression models predicting the four outcomes are summarized in Table 2. We present coefficients for the focal predictors only: physical disability status, age group, gender, and occupational type (complete models are presented in Appendix Tables 2–5 in the online version of the article). Each subsequent model incorporates an additional block of covariates as described previously.

Persons with physical disability report significantly higher levels of perceived job discrimination and inequality at work and lower levels of support from coworkers and supervisors relative to persons without disability. The unadjusted effects (Model 1) diminish by 31% to 54% across outcomes yet remain sizeable and statistically significant in the fully adjusted models (Model 5). Demographic characteristics slightly suppress these effects on perceived job discrimination and inequality; the unadjusted effects of disability on the outcomes increase in magnitude by 15% to 24% in Model 2. This suppression reflects the fact that workers ages 50 to 64 are overrepresented among those with disability yet report significantly less discrimination and inequality relative to the younger age groups (see Appendix Table 1 in the online version of the article).

The association between disability and the outcome measures weakens when SES indicators (Model 3) and body weight and physical health conditions (Model 4) are adjusted. The mental health measures account for considerable attenuation (30%–45%) of the association across all four workplace outcomes in Model 5. However, the effect of disability remains statistically significant and of modest magnitude in the fully adjusted model. Model 5 shows that workers with disability report significantly higher levels of perceived job discrimination ($b = .13$, $p < .01$) and inequality ($b = .06$, $p < .05$) and lower levels of support from their coworkers ($b = –.11$, $p < .01$) and supervisors ($b = –.10$, $p < .05$).

In a supplemental analysis focused on workers and nonworkers in the MIDUS, persons with disability had elevated odds of being passed over for a job promotion (odds ratio [OR] = 1.46, $p < .01$) and

Table 1. Sample Characteristics by Physical Disability Status ($N = 2,030$).

	No Disability $n = 1,308$ (64%)		Any Disability $n = 722$ (36%)		
Variable	*n*	%, *M* (*SD*)	*n*	%, *M* (*SD*)	*p* Value
Sociodemographics					
Age group					
Young adults (ages 30–39)	182	14	47	7	***
Early midlife (ages 40–49)	513	39	207	29	
Late midlife (ages 50–64)	613	47	468	65	
Gender					
Female	622	48	415	57	***
Male	686	52	307	43	
Race-ethnicity					
Non-Hispanic white	1,201	92	667	93	
Minority	106	8	54	7	
Current marital status					
Married	1,009	77	490	68	***
Unmarried	297	23	228	32	
Education					
< High school grad	34	3	38	5	***
High school grad	254	19	187	26	
Some college	372	28	223	31	
BA or higher	646	49	274	38	
Occupation type					
Upper-white-collar	625	48	317	45	*
Lower-white-collar	380	29	254	36	
Blue-collar/farm/military	286	22	141	20	
Body mass index					
Normal/underweight	472	36	166	23	***
Overweight	510	39	238	33	
Obese	264	20	286	40	
Refusal	62	5	32	4	
Medical conditions					
Any	796	61	592	82	***
None	512	39	130	18	
Mental disorders					
Any	178	14	148	21	***
None	1,120	86	561	79	
Negative affect (1–5)	1,303	1.42 (.46)	722	1.62 (.59)	***
Workplace experience					
Perceived job discrimination (1–5)	1,274	1.79 (.75)	709	2.00 (.86)	***
Perceived inequality (1–4)	1,278	1.54 (.51)	710	1.66 (.55)	***
Support from coworkers (1–5)	1,171	3.68 (.71)	645	3.51 (.74)	***
Support from supervisors (1–5)	1,096	3.63 (.83)	630	3.48 (.93)	***

Note: Chi-square tests (for categorical variables) and *t* tests (for continuous variables) were used to assess significant differences between the two groups.
Source: Midlife in the United States second wave, 2004–2006;
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 2. Ordinary Least Squares Regression Model Predicting Workplace Experiences.

	Model 1	Model 2	Model 3	Model 4	Model 5
Job discrimination (*n* = 1,983)					
Disability[a]	.22*** (.04)	.24*** (.04)	.23*** (.04)	.19*** (.04)	.13** (.04)
Age group[b]					
Young adulthood		.17** (.06)	.15* (.05)	.17** (.06)	.12* (.06)
Early midlife		.15*** (.04)	.15*** (.04)	.18*** (.04)	.13** (.04)
Female[c]		–.08* (.04)	–.06 (.04)	–.06*** (.04)	–.06 (.04)
Occupation type[d]					
Lower-level white-collar			.08 (.05)	.08 (.05)	.07 (.04)
Blue-collar/farm/military			.29*** (.05)	.19*** (.05)	.21*** (.05)
Adjusted R^2	.02	.04	.05	.06	.12
Perceived inequality (*n* = 1,988)					
Disability[a]	.13*** (.02)	.15*** (.03)	.13*** (.02)	.11*** (.02)	.06* (.03)
Age group[b]					
Young adulthood		.13** (004)	.11** (004)	.12** (004)	.08* (.04)
Early midlife		.11*** (.03)	.12*** (.03)	.12*** (.03)	.10*** (.02)
Female[c]		–.03 (.02)	–.03 (.02)	–.03 (.03)	–.04 (.02)
Occupation type[d]					
Lower-level white-collar			.19*** (.03)	.19*** (.03)	.19*** (.03)
Blue-collar/farm/military			.19*** (.03)	.18*** (.03)	.20*** (.03)
Adjusted R^2	.01	.03	.07	.07	.15
Support from coworkers (*n* = 1,816)					
Disability[a]	–.16*** (.04)	–.16*** (.04)	–.16*** (.04)	–.14*** (.04)	–.11** (.04)
Age group[b]					
Young adulthood		.01 (.06)	.01 (.06)	.01 (.06)	.02 (.06)
Early midlife		.04 (.04)	.00 (.04)	–.00 (.04)	.01 (.04)
Female[c]		.09* (.03)	.08* (.04)	.07 (.04)	.07* (.04)
Occupation type[d]					
Lower-level white-collar			–.02 (.04)	–.02 (.04)	–.01 (.04)
Blue-collar/farm/military			–.04 (.05)	–.04 (.05)	–.04 (.05)
Adjusted R^2	.01	.02	.01	.01	.03
Support from supervisors (*n* = 1,726)					
Disability[a]	–.15** (.04)	–.17*** (.05)	–.17*** (.05)	–.14** (.05)	–.10* (.05)
Age group[b]					
Young adulthood		.01 (.07)	.01 (.07)	.00 (.07)	.03 (.07)
Early midlife		–.04 (.05)	–.02 (.05)	–.03 (.05)	–.01 (.05)
Female[c]		.12** (.04)	.09* (.04)	.09* (.05)	.10* (.05)
Occupation type[d]					
Lower-level white-collar			.09 (.05)	.09 (.05)	.10 (.05)
Blue-collar/farm/military			–.02 (.06)	–.02 (.06)	–.02 (.06)
Adjusted R^2	.01	.01	.01	.01	.03

Note: Unstandardized coefficients and standard errors are presented. Age groups are young adulthood (30–39), early midlife (40–49), and late midlife (50–64). Model 1 includes physical disability status only; Model 2 incorporates age group, race, gender, and marital status; Model 3 additionally controls for education and occupation; Model 4 further adjusts for body mass index and any physical condition; and Model 5 additionally controls for clinical mental disorder and negative affect.

Source: Midlife in the United States second wave, 2004–2006.

[a]No physical disability is reference category.

[b]Late midlife is reference category.

[c]Male is reference category.

[d]Upper-level white-collar is reference category.

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

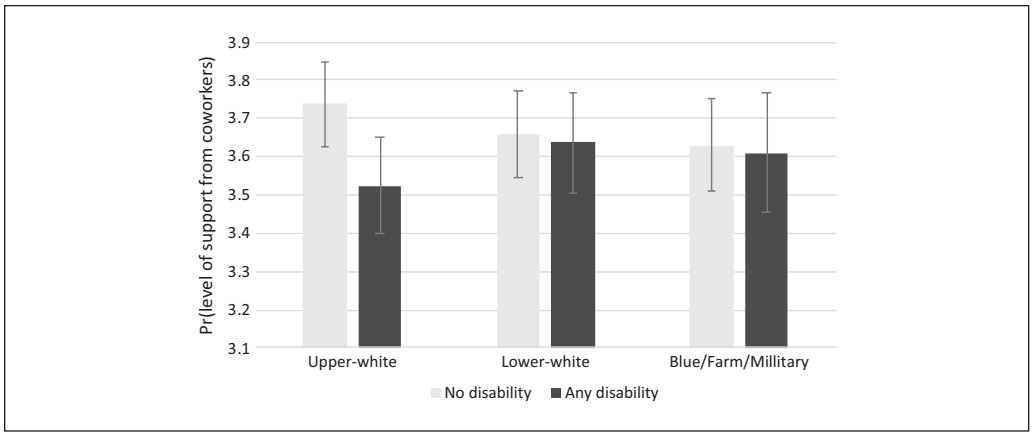

Figure 1. Support from Coworkers by Physical Disability Status across Three Occupational Types.
Note: Pr = predicted.
Source: Midlife in the United States second wave, 2004–2006.

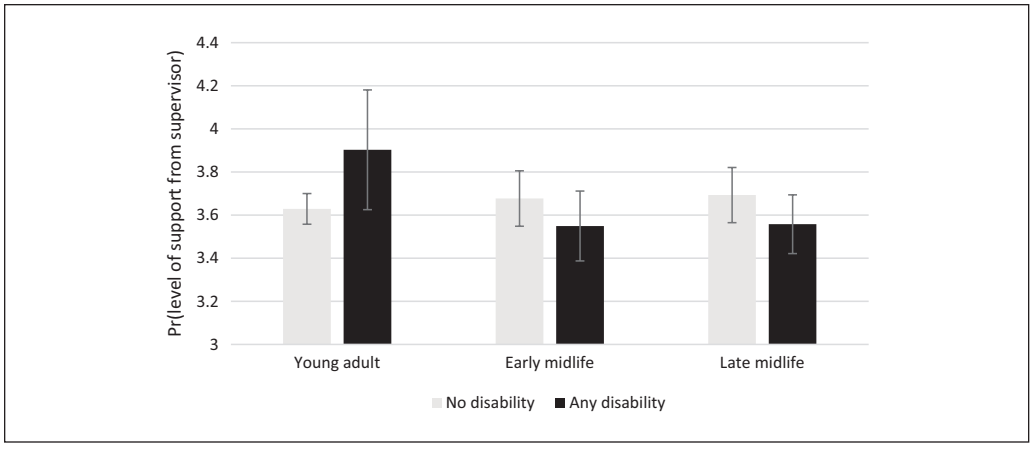

Figure 2. Support from Supervisor by Physical Disability Status across Three Age Groups.
Note: Pr = Predicted.
Source: Midlife in the United States second wave, 2004–2006.

getting fired (OR = 1.83, $p < .001$) due to a personal characteristic. However, we did not find significant differences in whether one was hired (OR = 1.23, $p > .10$), perhaps revealing compliance with the ADA upon recruitment but weaker compliance regarding retention and promotion.

Moderation analyses: Do the effects of disability on workplace experiences vary by subgroup? We next evaluate whether the effects of disability on the four outcomes differ significantly by age, gender, and occupational type. For ease of presentation, we plot statistically significant interaction terms in Figures 1 through 3 (full models available from authors). None of the two-way interaction terms were statistically significant for the outcome perceived job discrimination, suggesting that the demeaning or discriminatory treatment experienced by workers with physical disability does not differ systematically on the basis of age, gender, or occupation. However, we did find that the disability effect differs significantly by: (1) occupational group for coworker support, $F(2, 1741) = 3.60$, $p < .05$; (2) age for supervisor support, $F(2, 1654) = 3.42$, $p < .05$; and (3) gender for perceived workplace inequality, $F(1, 1908) = 9.34$, $p < .01$.

As shown in Figure 1, upper-white-collar workers with disability perceived significantly lower

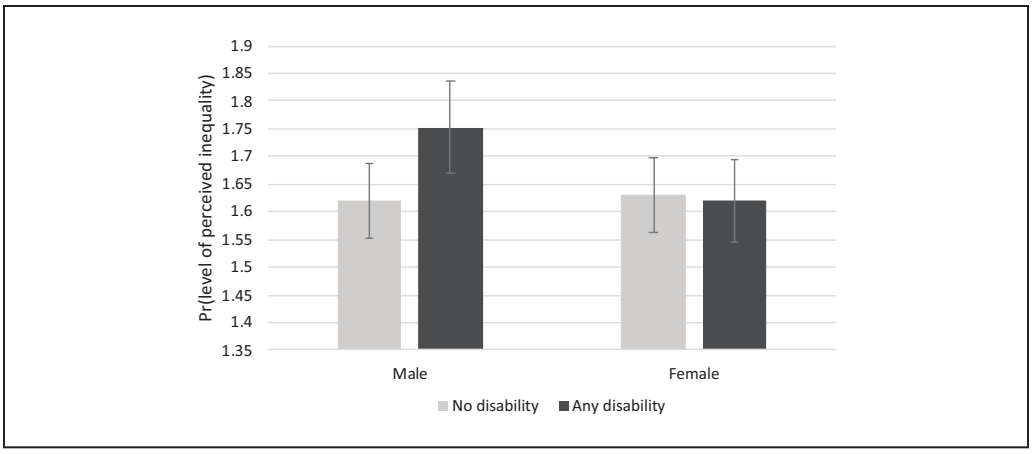

Figure 3. Perceived Inequality at Work by Physical Disability Status among Men and Women.
Note: Pr = Predicted.
Source: Midlife in the United States second wave, 2004–2006.

levels of support from their coworkers relative to their counterparts without functional limitation (predicted levels = 3.52 vs. 3.74, $p < .001$), whereas levels of coworker support are not statistically different among lower-white-collar or blue-collar/farm/military workers on the basis of disability. Among persons with disability, levels of perceived coworker support are significantly lower among upper-white-collar workers relative to lower-white-collar workers (3.52 vs. 3.64, $p < .05$); no significant difference between lower-white-collar and blue-collar-workers with disability is detected.

Results plotted in Figure 2 show that levels of support from a supervisor are similar for workers without physical disability across the three age groups, but younger workers with disability perceive significantly higher levels of support from supervisors relative to both their age peers without disability and their older counterparts with disability (3.90 vs. 3.55 and 3.56 respectively, $p < .05$). Finally, Figure 3 shows that predicted levels of perceived inequality are significantly higher for men with versus without physical disability (predicted level = 1.75 vs. 1.62, $p < .001$), although we do not detect comparable disparities among women. Among persons with disability, men report significantly higher levels of perceived workplace inequality relative to women (1.75 vs. 1.62, $p < .01$).

DISCUSSION

Our study demonstrates the far-reaching ways that physical disability affects the everyday lives of working adults. Two major findings emerged. First, persons with physical disability have more challenging work lives relative to their counterparts without disability, reporting less support from coworkers and supervisors, more discrimination, and fewer perceived opportunities for rewarding work—patterns that persist net of all covariates, including one's underlying physical and mental health conditions. These results are consistent with stigmatization perspectives, which suggest that persons with devalued identities are vulnerable to interpersonal exchanges and structural constraints that may undermine one's well-being (Hatzenbuehler 2016). Extensive research documents that persons with disability have objectively poorer quality work experiences, as evidenced by lower earnings, less training and benefits, and poorer quality jobs (R. L. Brown and Moloney 2019; Kaye 2010; Maroto and Pettinicchio 2014; Schur et al. 2009). Our work shows that these disadvantages also extend to subjective aspects of work. Workers with even modest functional limitations feel less supported by their coworkers and supervisor, believe that they are treated as if they are less capable, and are given fewer opportunities for growth and advancement relative to their colleagues.

Our supplemental analyses focused on workers and nonworkers found that physical disability status did not predict *whether* one was hired but did predict reports of being fired or passed over for promotion due to a personal characteristic. These results suggest that employers are generally compliant with the ADA's stipulation that they cannot

discriminate against hiring a qualified applicant with a disability provided they meet all job requirements and can perform its essential functions with or without reasonable accommodations. However, these protections may wane after a worker is hired. Workers with physical disability who are stigmatized by coworkers may not formally report these negative encounters to a supervisor. Studies of workplace microaggressions on the basis of sex, race, and sexual orientation document that workers do not report mistreatment for reasons including fear of further marginalization or retribution, uncertainty about the motivation behind the mistreatment, denial, or the belief that nothing will change even if they do file a formal complaint (Sue 2010).

Workplace training programs for all employees focused on implicit biases, invisible disabilities, disclosure, accommodations, and microaggressions as well as the proactive recruitment and promotion of persons with disability may help to reduce interpersonal and structural stigmatization (Draper, Reid, and McMahon 2011; Hatzenbuehler 2016). Ombudspersons could provide an impartial space where workers with disability could share their concerns without fear of reprisal or retribution. For example, in Germany, companies employing at least five persons with disability must provide workers access to an impartial ombudsperson who can advocate for them (Sherbin et al. 2017).

Our second major finding is that the disadvantageous work experiences reported by persons with physical disability were generally consistent across age, sex, and occupational subgroups, underscoring the centrality of disability stigma with respect to a range of subjective workplace experiences. However, we detected three statistically significant moderation terms, although our results do not align with predictions generated from double-jeopardy perspectives (R. L. Brown and Moloney 2019). Rather, two characteristics typically associated with structural *advantage*—being male and having a professional occupation—heightened the perceived negative consequences of disability.

Men with physical disability perceived significantly more work inequity relative to men without disability and all women. This pattern diverges from studies showing that women with physical disabilities experience the double burden of ableism and sexism, undermining their earnings and job autonomy (e.g., R. L. Brown and Moloney 2019; Maroto and Pettinicchio 2014). We suspect that our results reflect the different gender-typed expectations placed on workers and the expectations workers hold for themselves. The "ideal" worker is presumed to be male and able-bodied (Cockburn 1993). Men with disability who diverge from this ideal may be not be afforded the same workplace opportunities as their peers without disability. Men with disability also may be more sensitive to blocked workplace opportunities because such obstacles defy expectations for what their work lives should be, whereas women may have more modest expectations or may anticipate thwarted opportunities given long-standing sexism in the workplace (Phelan 1994). Men also tend to feel more confident in their abilities, perceive a greater chance of successful outcomes like workplace promotions, and feel more deserving of successful outcomes relative to women (Stamarski and Son Hing 2015). As such, they may be more cognizant of and troubled by impediments to the pursuit of such outcomes.

We also found that physical disability takes a heightened toll on another presumably privileged group: upper-white-collar workers. Upper-white-collar workers with functional limitation report the lowest levels of coworker support relative to upper-white-collar workers without disability and all lower-white-collar and blue-collar workers. This disparity among upper-white-collar workers may reflect the fact that disability is less common among higher-status workers relative to lower-status workers, given a well-documented socioeconomic health gradient and the overrepresentation of workers with disability in lower-prestige jobs (Kaye 2010; Krahn et al. 2015; Maroto and Pettinicchio 2014). As such, upper-white-collar workers may be less familiar with and sensitive to disability and may maintain distance from or withhold support for their colleagues with disability. White-collar workers also may be less likely to be a wise person acquainted with a loved one's disability, rendering them less sensitive to the needs of their colleagues (Goffman 1963; Markowitz and Engelman 2017). Prior studies similarly show that obese white-collar workers are significantly more likely than obese blue-collar workers to report workplace discrimination (Carr and Friedman 2005). These results underscore that stigma is an inherently social process; the extent to which a personal attribute such as disability is devalued varies across social contexts (Altman 2014; Hatzenbuehler 2016).

Finally, young adult workers with disability report significantly more support from their supervisor relative to their age peers without disability and their older counterparts with disability. We cannot ascertain whether this reflects age or cohort patterns, although we find the latter more convincing. The youngest MIDUS participants, born in the 1960s and 1970s, would have entered the labor

market following or shortly before the 1990 passage of the ADA. As such, they may have received more responsive accommodations, the benefit of school-to-work or work-based initiatives, and more thoughtful treatment in their work and social encounters in adulthood (Shandra and Hogan 2008). Given these cultural and structural shifts, members of this cohort may feel more comfortable disclosing a disability to and seeking support from their supervisor.

To further explore this possibility, we contrasted the workplace experiences of the young-adult and early-midlife age groups roughly 10 years later using MIDUS 3 (2013).[3] Among the youngest cohort who were in early midlife in 2013, persons with versus without disability did not differ significantly with respect to job discrimination or coworker support, although we did find significant disparities with respect to supervisor support and perceived inequality (see Supplemental Table 7 in the online version of the article). In contrast, the later-midlife cohort in 2013 revealed a greater number of disparities on the basis of disability status, including more perceived discrimination and inequality and less coworker support. These results provide suggestive evidence of modest advances over time for the younger cohort. The findings also suggest that the experiences of older workers with disability may have worsened following the Great Recession, a consequence of intensified ageism and ableism in the tight labor market (Kaye 2010; Neumark and Button 2014). Future studies should explore more fully the extent to which historical and structural changes shape experiences of stigmatization among persons with disability (Hatzenbuehler 2016).

Limitations and Future Directions

Our results provide compelling evidence from a large national sample that the impact of physical disability on U.S. adults' work lives extends beyond objective indicators like employment status and income. However, the study has several limitations that warrant exploration in future research. First, we did not focus on racial differences in the impacts of disability. In preliminary analyses, we found no statistically significant race moderation effects. This may reflect statistical power, given the modest number of racial minorities with disability in the analytic sample (n = 54). Future analyses could incorporate data from the MIDUS Milwaukee study, which oversamples black individuals, to carry out adequately powered analyses of the intersectional effects of race and disability on workplace experiences.

Second, we could not ascertain whether participants attribute their stigmatizing workplace experiences to their own disability or to other external factors such as a toxic company culture or the idiosyncratic acts of a problematic colleague (e.g., Schur et al. 2009). However, one's perceptions of structural obstacles and lack of support—regardless of the cause—are important outcomes in their own right and may affect one's well-being. Unsupportive workplace relationships and perceived lack of opportunities rank among the top reasons why employees leave their job (Eisenberger et al. 2002). Securing a new position is particularly difficult for persons with disability, especially during economic downturns, potentially contributing to widening economic disparities on the basis of disability status (Kaye 2010; Shandra 2018).

Third, we used a broad self-reported measure of physical disability rather than a specific measure of the condition that limits one's daily functioning. MIDUS does not ask respondents to specify the condition(s) that limits functioning, weakening our capacity to explore how workplace experiences may vary based on particular health conditions. However, our multivariate results barely changed in magnitude or significance when the presence of 27 physical and two mental health conditions were adjusted. Thus, our results suggest that it is the manifestation of one's conditions, such as difficulty walking, rather than a particular health problem that elicits unfair or unsupportive behaviors from coworkers. We encourage future studies to distinguish "visible" versus "invisible" health conditions because each may elicit distinct coworker reactions (Sherbin et al. 2017). The former may lead to social rejection or questioning of one's competence, whereas the latter may lead to accusations of malingering or shirking one's duties (Olkin et al. 2019).

CONCLUSIONS

Our study revealed powerful effects of disability status on the daily experiences of workers even after their physical and mental health conditions are controlled. These results reveal the persistence and reach of ableism. Workers with physical disability are in a privileged position relative to their peers not in the labor force (Kaye 2010), yet they still evidence poorer quality relationships, daily discrimination, and perceived blocked opportunities. These processes may undermine the emotional well-being, social integration, and economic well-being of a population that already occupies a marginalized position relative to their peers without disability (R.

L. Brown and Moloney 2019; Hatzenbuehler 2016; Shandra 2018). The association between physical disability and compromised work experiences are intensified for two subgroups that generally possess other structural advantages: men and professional workers. These results are provocative and warrant further exploration. At first blush, they suggest that disability is especially stigmatizing for subgroups traditionally upheld as the image of the ideal worker—male and professional—such that their functional limitations are more salient and judged more harshly because they signify a departure from "usual, [and] expected" behaviors (Verbrugge and Jette 1994:3). Alternatively, the elevated levels of discontent with one's work opportunities among men with disability and less coworker support among professional workers with disability may reflect their higher expectations for how they should be treated (Stamarski and Son Hing 2015). Disabled women and blue-collar and lower-white-collar workers may be resigned or inured to structural disadvantages on the basis of "double jeopardy." As such, they may not register discontent, pursue informal or formal complaints, or feel empowered to advocate for change (e.g., Phelan 1994).

Our results suggest that employers should more fully consider the multiple identities of their workers with disability as they strive for a more inclusive culture. Employers must recognize that disability is neither a "master status" nor the "exclusive status" of persons with impairments (Asch and Fine 1988:3). Rather, it may intersect with other identities such as sex, age, or occupational status that may enhance or undermine one's power. Supporting, retaining, and promoting workers with disability is a timely and important goal. The number of working-age persons with disability has risen steeply over the past two decades, and these workers are diverse with respect to gender, age, occupations, race, and other identities (Joffe-Walt 2013). ADA policies prohibiting discrimination in hiring and firing are not enough; workplace inclusiveness programs that take into account the multiple sources of interpersonal and structural stigma facing those at risk of double jeopardy are necessary. Broader cultural shifts that challenge the pervasive "deficit model" narrative also are critical to eroding the structural and interpersonal stigmatization of persons with disability (Pfeiffer 2001).

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NOTES

1. We do not focus on racial differences in this study given the modest number of racial minorities with disability in the analytic sample (n = 54).
2. Studies examining data from federal court cases (Dick-Mosher 2015) and formal complaints filed with the Equal Employment Opportunity Commission (Shaw, Chan, and McMahon 2012) find some evidence that disability status interacts with sex and other personal characteristics. However, these studies acknowledge that only a fraction of stigmatizing or discriminatory encounters rise to the level of formal complaint, with these complaints typically filed by those most empowered to do so.
3. The late-midlife group in 2004 was ages 60 to 74 in Midlife in the United States 3 (2013) and were largely retired; thus, they were excluded from the supplemental analyses.

SUPPLEMENTAL MATERIAL

Appendix Tables 1 through 7 are available in the online version of the article.

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