

# Perceptions of Job Hazards and Requests for Accommodation Among Pregnant Women in a Large Urban Hospital System

Candace Tannis, MD, MPH, Ariana Schanzer, MS, Elizabeth Milbank, MD, MPH, Omara Afzal, DO, MPH, and John Meyer, MD, MPH

**Background:** Many pregnant women remain uninformed about job accommodation options or have not been empowered to ask their employers. **Methods:** A cross-sectional survey of a sample base of pregnant women from late first through third trimester was conducted. Associations between job perception variables, work characteristics, race/ethnicity, and income were assessed using binary logistic regression. **Results:** Workers in service/support occupations were twice as likely as those in management to perceive need for job duty change and to request job accommodation. Perception of needed job change was higher when jobs had high physical demands and low substantive complexity. **Conclusions:** We found positive relationships between highly physical work, perception of harm, and need for job change in pregnancy. Further research could explore worker/employer characteristics explaining why these perceptions did not translate into requesting and receiving job accommodation during pregnancy.

**Keywords:** pregnancy, job duty accommodations, perceptions of harm, physical demands, job complexity

In 2019, women made up nearly half of the US labor force (47%), compared with 38% in 1970.<sup>1</sup> More American women work into and through their childbearing years, with more than 1.6 million first-time pregnant workers in the United States in 1 year.<sup>2</sup> More than eight of every 10 pregnant women work during their last month of pregnancy and the majority of those intend to return to work after maternity leave.<sup>3,4</sup> With the increasing number of pregnant individuals in the work force, providers and patients have raised questions about the potential risks of certain types of work during pregnancy.

Over time, employment in the United States has evolved from primarily industrial and manufacturing work to a preponderance of service-oriented jobs and managerial positions. However, despite the diversification of employment and a reduction in exposure to traditional industrial hazards, work exposures in the current economy may still be deleterious. These exposures may include extensive working

## CME Learning Objectives

After completing this enduring educational activity, the learner will be better able to:

- Identify potential knowledge gaps and opportunities for interventions to improve access to job duty accommodations for pregnant individuals in the U.S.
- Explain the relationship between job characteristics and pregnant workers' perceptions of job harm and need for accommodation during pregnancy.
- Describe differences in job demands by occupation and discuss how socioeconomic characteristics can impact that relationship.

hours, shift work, standing, lifting, and physical workload, which may present risks for adverse pregnancy outcomes.

Employment is generally not harmful to pregnancy; with risks not demonstrably greater in the large majority of women who have less-strenuous jobs or in those who are able to modify their work activity.<sup>5-7</sup> Most individuals can safely work until the end of pregnancy without placing themselves or their fetus at undue risk. However, certain features of work may nonetheless be harmful. Meta-analyses of studies on work hazards in pregnancy over the past two decades have demonstrated increased risks from physically demanding work for preterm delivery, small-for-gestational age birth, and hypertension or preeclampsia,<sup>5,7-9</sup> although the magnitude of risk estimates vary across these aggregated studies. Other occupational exposures significantly associated with preterm birth include prolonged standing, shift and night work, and high cumulative work fatigue, the latter encompassing a combination of prolonged standing, work on a strenuous industrial machine, substantial physical exertion or load carrying; routine work, or exposures to noise, cold temperature, wet atmosphere, or chemical substances.<sup>5,10</sup> Although estimated relative risks are in the range of 1.2 to 1.5 for many of these exposures, when distributed across a large population of working women their attributable risk may be substantial. Because many contributing factors to preterm delivery remain either unknown or unmodifiable, attention to a modifiable hazard can be of considerable importance. Physician organizations, particularly the American College of Obstetrics and Gynecology, have issued position statements calling for better clinical assessment of the reproductive health effects of environmental and workplace exposures, and the need for accommodated work when occupational hazards may present a threat to maternal and fetal well-being.<sup>11,12</sup>

However, many women remain uninformed about their options or have not been empowered to ask their employers about accommodations. In a national survey of women who gave birth in US hospitals, more than half of women felt that they needed a change in their job duties or work schedule during pregnancy.<sup>4</sup> However, at least one quarter of women who wanted a schedule adjustment, and 40% of those who felt they needed a duty change did not discuss these concerns with their employers.

We hypothesize that economic circumstances and employer policy may be acting as a countervailing force to pregnant workers' understanding of workplace hazards, and influence whether a woman asks for,

From the Icahn School of Medicine at Mount Sinai, New York, New York (C.T., A.S., E.M., O.A., J.M.); NYU Langone School of Medicine, New York, New York (A.S.); and Capital Health Medical Center, Trenton, New Jersey (O.A.).

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The JOEM editorial board and planners have no financial interest related to this research. Address correspondence to: Candace Tannis, MD, MPH, One Gustave Levy Place, Box 1059, New York, NY 10029 (candace.tannis@mssm.edu).

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or receives, work accommodations, and that this will differ by industry type and occupation. We expect that this will be most detrimental for women in greatest need of accommodations, such as those in highly strenuous and lower-paying jobs with limited financial and social safety nets.

We assessed perception of occupational hazards during pregnancy, and estimates of the availability and access to workplace accommodations in a sample of antepartum pregnant women. In addition, we used scales derived from the O\*NET that measure the physical demands and substantive complexity of specific jobs to determine the extent to which women in more physically or psychologically stressful work were considering their jobs as hazardous, and consequently requesting accommodations at work.

## METHODS

We conducted a cross-sectional survey of a sample base of pregnant women in the late first through third trimester. Women were recruited by study personnel in two antepartum clinics within our hospital system. Participants were asked to complete a paper questionnaire on workplace and practitioner characteristics and their own obstetrical history. To be eligible, participants must have been working 30 hours a week or more, a criterion for “full-time” work in our prior studies<sup>13</sup>; be at least 18 years of age, and able to complete the questionnaire in either English or Spanish. Those with pregnancies in the early first trimester (less than 12 weeks) or with a multiple-gestation pregnancy were excluded.

A validated questionnaire used in a prior study of occupational stressors<sup>13</sup> was adapted for this study to include a focus on participant self-assessment of work, work modifications made by, or requested of, the employer during the pregnancy. Demographic information was also obtained, including maternal age, race/ethnicity, education level, household income stratum, and parity. Participants were also asked whether they had any of the following during pregnancy: self-reported hypertension, problems with hyperglycemia, threatened miscarriage, or evidence of fetal growth problems.

Data from the questionnaires were entered into an Excel (Microsoft Excel 2016) database, cleaned and examined for transcriptional errors. Occupation was coded in the dataset according to the most recent Occupational Information Network (O\*NET) classification for standardization of occupational data (O\*NET Resource Center, 2017) and then classified into aggregate groups based on their standard occupational classification (SOC: two-digit code), methods used in a previously published analysis of NYC HANES data on occupation.<sup>14</sup>

Because of the variety of jobs represented in our study sample, and to better compare job demands across occupations, two variables, physical demand (PD) and job substantive complexity (SC) z-scores were created from O\*NET 2017 job attribute data.<sup>15</sup> These scores were derived via the factor analysis described by Hadden et al<sup>16</sup> and used in previous work.<sup>15,17</sup> The variables were composed as an unweighted sum of the 10 O\*NET job attribute measures having the highest loadings on each factor, transformed into a normal distribution. Substantive complexity scores are composed of job-specific measures that assess deductive reasoning, updating and using relevant knowledge, inductive reasoning, complex problem solving, active learning, making decisions and solving problems, ability utilization, critical thinking, getting information, and low task repetition. A higher score reflects work that requires these attributes to a greater degree. The physical demands variable likewise represents a 10-item score on elements that include required stamina, reaction time, body equilibrium, limb movement, time spent sitting, and environmental controls at the workplace; high scores on this variable indicate greater physically demanding work. O\*NET job titles were linked with the SOC code for each participant’s occupation, and SC and PD scores for each factor were imputed to the occupation noted in the dataset. These values were then dichotomized so that a physical demand score greater than or equal to zero was considered a job with high physical demands, and a score less than zero was considered to be a job without high

physical demands. For job complexity, we reverse-coded the resultant scores to provide a directionality equivalent to the physical demands score, that is, an individual with a score greater than zero was considered to have a low job complexity score, and a value less than zero represented greater substantive complexity at work.

Analyses were conducted using SPSS (IBM SPSS Statistics 28.0). Initial analyses evaluated the prevalence of pregnancy health risk factors, the proportion of participants in major occupational categories, features of work, attitudes toward work, and perceptions of risk. We examined the association between aggregate occupational categories and the need for job accommodation using  $\chi^2$  analyses with post hoc pairwise comparisons using “management” as our referent category to further stratify between-group differences. Associations between job perception variables and PD and SC scores were assessed using binary logistic regression and stratified by race/ethnicity and household income. Education was excluded from our logistic regression analyses because of the high collinearity with income category. Similarly, the presence of any comorbidity was excluded from our reported results as the effect estimates for outcomes were unchanged by inclusion of these data. The study was approved by our institutional review board, and all participants provided signed informed consent before questionnaire administration.

## RESULTS

### Demographics

Four hundred twenty-six eligible pregnant women completed the questionnaire. Forty-three percent ( $n = 183$ ) of participants identified as White, and approximately one-fifth self-identified as Black/African American and Latina respectively. Slightly more than 20% had a high school education or less, and greater than one third had personal incomes less than \$50,000 per year. Approximately 15% of respondents did not answer the income question. All participants had both public or private health insurance, and approximately one quarter reported participation in income-screening entitlement programs (ie, WIC, SNAP, TANF, Section 8). The most common major occupational groups were management ( $n = 58$ ), office and administrative support ( $n = 52$ ), and sales ( $n = 46$ ). (Table 1)

### Health Risk Factors

Median age and gestational age at enrollment were 31.3 years and 24 weeks respectively; half of the participants were primigravidas.

**TABLE 1.** Occupations Held by Participants at Time of Study Enrollment by 2010 Standardized Occupational Classification Major Group

Major Occupational Group (SOC Major Code)	n	%
Management (SOC 11)	58	13.6%
Office and Administrative Support (SOC 43)	52	12.2%
Sales and Related (SOC 41)	46	10.8%
Education, Training and Library (SOC 25)	39	9.2%
Healthcare Support (SOC 31)	33	7.7%
Business and Finance (SOC 13)	28	6.6%
Arts, Design, Entertainment, Sports and Media (SOC 27)	28	6.6%
Healthcare Practitioners and Technical (SOC 29)	22	5.2%
Food Preparation and Serving (SOC 35)	22	5.2%
Community and Social Services (SOC 21)	21	4.9%
Personal Care and Service (SOC 39)	18	4.2%
Computer, Mathematics, Architecture, Engineering, Life and Social sciences* (SOC 15, 17, 19)	16	3.7%
Legal (SOC 23)	14	3.3%
Building and Grounds Cleaning, Maintenance (SOC 37)	14	3.3%
Installation Production, Transportation, and Material Moving, Military* (SOC 49, 51, 53)	8	1.9%
Protective Services (SOC 33)	7	1.9%

Approximately 6% of women reported that they had a history of hypertension ( $n = 27$ ) during their current pregnancy, 8.5% reported a threatened miscarriage ( $n = 36$ ), 5.4% reported having gestational diabetes, and just more than 2% reported that there was concern for a fetal growth problem ( $n = 9$ ) (Table 2).

## Job Perceptions and Work Accommodations

Of those who responded, approximately one quarter ( $n = 105$ ) believed that there were hazardous components of their workplace and 30% ( $n = 133$ ) of women believed that they needed job duty modifications. Of individuals reporting either that they viewed their job as

harmful or that a job duty change was needed ( $n = 178$ ), approximately half reported that they requested a job duty change ( $n = 87$ ). Approximately two thirds of requests for change were reported as granted ( $n = 55$ ).

When examining the relationship between occupation and work accommodations, individuals who worked in service and support occupations were twice as likely than those in management (referent group), to perceive a need for a job duty change (48.4% vs 24.3%,  $P < 0.001$ ) and to request a job accommodation (37.1% vs 19.4%,  $P = 0.009$ ), but there was no difference between major occupational groups in whether an accommodation was granted ( $P = 0.31$ ) or whether individuals reported that they believed their job to be harmful ( $P = 0.36$ ) (Table 3). There were no other statistically significant differences between occupational categories.

**TABLE 2.** Demographics, Health Data, and O\*NET-Based Job Characteristics of Participants

Variable	Value ( $n = 426$ )
Maternal age, mean (SD), yr	31.3 (5.8)
Gestational age at enrollment, mean (SD), wk	24 (8.9)
Education	
High school or less	97 (22.8%)
Associates degree	101 (23.7)
Bachelor's degree	126 (29.6)
Master's degree or higher	95 (22.3)
Missing/did not answer	7 (1.6)
Race/ethnicity	
White	183 (43.0%)
Black	82 (19.2)
Latina	81 (19.0)
API	52 (12.2)
Native American	1 (0.2)
Missing/did not answer	27 (6.3)
Household income	
<50,000	135 (31.6%)
50,000–99,000	98 (23.0)
>100,000	129 (30.3)
Missing/did not answer	64 (14.9)
Means tested program	100 (24%)
First pregnancy	
Yes	211 (49.5%)
No	215 (50.5)
Hypertension	
Yes	6.3% ( $n = 27$ )
No	93.7% ( $n = 399$ )
Threatened miscarriage or bleeding	
Yes	8.5% ( $n = 36$ )
No	91.3% ( $n = 389$ )
Gestational diabetes	
Yes	5.4% ( $n = 23$ )
No	94.6% ( $n = 402$ )
Fetal growth problem	
Yes	2.1% ( $n = 9$ )
No	97.9% ( $n = 417$ )
Substantive complexity (O*NET), mean Z-score (SD)	
All	−0.06 (0.93)
White	0.22 (0.84)
Black	−0.49 (0.89)
Latina	−0.52 (0.79)
API	0.39 (0.89)
Work physical demands (O*NET), mean Z-score (SD)	
All	−0.54 (0.61)
White	−0.70 (0.57)
Black	−0.33 (0.89)
Latina	−0.35 (0.55)
API	−0.72 (0.57)

API, Asian/Pacific Islander.

\*Represents a combination of SOC groups with similar physical demands and fewer than 5 participants.

## O\*NET Job Characteristics

Approximately 24% of workers ( $n = 101$ ) held a job that was classified using O\*NET variables as having high physical demands, and slightly under half ( $n = 208$ , 49%) reported having a job that was graded as low in substantive complexity. Furthermore, approximately one fifth ( $n = 84$ ) of the survey participants were categorized in jobs that were both highly physically demanding and low in job SC. Table 4 summarizes the relationship between having a job with high PD and low SC and our four job-perception variables. Perception that a job change was needed was higher in those whose jobs carried a high PD score (odds ratio [OR], 1.8; 95% confidence interval [CI], 1.1–3.0) and 60% higher among those whose job had a low job SC score (OR, 1.6; 95% CI, 1.0–2.6). The odds of reporting that one's job was harmful were also over twice as great in those who had a physically demanding job (OR, 2.5; 95% CI, 1.5–4.3), but no such relationship was noted when looking at job SC (OR, 0.88; 0.54–1.4). There were no significant associations in whether a job duty change was requested (OR, 1.5; 0.87–2.5) or an accommodation was granted (OR, 0.92; 0.53–1.6) in those working a job with high physical demands. However, the odds of receiving a job accommodation during pregnancy were 90% higher among those whose jobs were classified as low substantive complexity (95% CI, 1.2–3.1).

## Race Ethnicity and Income

To explore the impact of race/ethnicity and income classification on our findings, we ran separate models stratified by race/ethnicity to compare within-group differences. Point estimates for our four job assessments vis-à-vis O\*NET-based characteristics did not differ significantly when comparing non-White to White individuals as a whole. However, within individual racial/ethnic groups, the odds of perception of job harm when working in a high physical-demand job were highest in Black women (OR, 3.2; 1.3–9.8) compared with the effect estimates seen in other racial/ethnic groups (Table 4). In addition, a much stronger association between work in a low SC job and perception that a job duty change was needed was seen in Black women, which differed markedly from that seen in White and Latina women. Among Asian women in physically demanding jobs, the point estimates were 4× higher for requesting a job accommodation and 4.7× higher for obtaining a job accommodation, although because of small numbers these estimates are imprecise.

We also examined the role of income category on the association between PD and SC scores and job perception variables. We combined the lowest two household income categories into one category (income <\$50,000) to present those on the lowest end of the income spectrum in New York City. We chose to analyze the income category \$50,000–99,000 as a separate stratum because the median NYC household income falls within these parameters,<sup>18</sup> and used the highest-income category (>\$100,000) as our referent group. A greater association between a high PD score with the perception of a harmful job was seen in individuals in households making between \$50,000

and \$99,000 (OR, 10.7; CI, 3.1–36.4) as shown in Table 4. There were no other significant differences by household income.

**DISCUSSION**

Our study indicates that pregnant women are infrequently requesting job accommodations, even though one quarter of the women, we surveyed believed that their jobs may be harmful to their pregnancy, and approximately one third felt that they needed a job duty change. This percentage was even greater among those who worked in the service sector. Service employment consists of a wide variety of occupations, including traditional food service workers, healthcare support workers (home health aides and nursing assistants); protective service workers (firefighters and law enforcement); as well as personal service workers such as beauticians, trainers, and pet groomers. These jobs are different in many respects but are connected by their potential for high physical demands on workers and as a result, an increased risk of physical harm. For example, individuals who work in food services spend the majority of their work day walking or standing, often lifting or carrying greater than 30 pounds of weight at a time.<sup>19</sup> Working in healthcare support occupations is associated with a high incidence of low back and other musculoskeletal injuries.<sup>20</sup> Therefore, it possible that service workers are aware of the physical demands of their job and are concerned about the potential impact on their pregnancy.

Our study indicates that pregnant individuals in many cases may also not be taking their concerns to employers. Of the women who perceived a potential harm in pregnancy or felt that a job duty change was needed, half made no request to their employer. This supports findings of previous studies showing that nearly half of women did not ask for accommodations even though they believe a change in work is needed.<sup>4</sup> Lack of employer-offered maternity leave benefits has been associated with increased quitting of work relative to leave-taking or working through pregnancy, underscoring the idea that inflexible policies lead to unnecessary departures from the workforce.<sup>21</sup> Furthermore, occupational factors such as night shift work, unfulfilling and inflexible work, and short work tenure are also predictors of leave taking during pregnancy.<sup>22</sup> Other contributory factors may be perceived lack of empowerment to ask for accommodation or differences in perceived supervisor level of support, both of which were out of the scope of our analyses but may warrant further qualitative analyses.

We found a strong positive relationship between having a highly physical job as estimated by O\*NET constructs, and both perception of harm and need for job change, but not with job duty change requests or accommodations granted, associations that are influenced in part by racial/ethnic and income categories. This suggests that pregnant women are able to appropriately judge the hazards and demands of their own work but, in many cases, may not be asking for work accommodation.

Similarly, having a job with a low SC score was associated with higher odds of perceiving that a job duty change was needed. However, unlike the relationship with PD score, pregnant women whose jobs were classified as having a low SC score had higher odds of requesting and being granted an accommodation overall. One possible explanation for this may be the distribution of specific occupations represented among individuals classified as having a low SC score. This group of women included those with jobs that were physically demanding with little job control to modify tasks, like those in healthcare support and food service, and jobs that may be repetitive, strenuous, and lacking in complexity but with more job support, thereby making women feel more empowered to ask for a job accommodation. This is consistent with previous data suggesting that individuals with impairment are more likely to request a job accommodation if they perceived a higher level of employer support.<sup>23,24</sup> In addition, there may have been other factors at play, like length of job tenure or prior leave taking, that may determine whether an accommodation request was made, but which were not included in our analyses. This is consistent with data

**TABLE 3. Participant Job Perception and Accommodation Request by Aggregated Occupational Category**

	Participant Perception That Job Harmful (n = 421)		Participant Perception of Needed Job Duty Change (n = 422)		Participant Requested Work Accommodations (n = 414)		Work Accommodations Granted (n = 411)	
	Yes	No	Yes	No	Yes	No	Yes	No
All participants	24.9% (n = 105)	75.1% (n = 316)	31.5% (n = 133)	68.5% (n = 289)	25.4% (n = 105)	74.6% (n = 309)	25.1% (n = 103)	74.9% (n = 308)
Occupational category								
Management/finance, business, health and sciences <sup>a</sup>	22.6	23.5% (n = 53)	76.5% (n = 173)	24.3% (n = 55)	75.7% (n = 171)	19.4% (n = 43)	80.6% (n = 179)	21.4% (n = 47)
Service and support <sup>b</sup>	94	27.5% (n = 25)	72.5% (n = 65)	48.4% (n = 44)	51.6% (n = 47)	37.1% (n = 33)	62.9% (n = 56)	28.1% (n = 25)
Sales and office administration <sup>c</sup>	98	24% (n = 23)	76% (n = 73)	33% (n = 32)	67% (n = 65)	27.4% (n = 26)	72.6% (n = 69)	30.9% (n = 29)
Installation, production, transportation, and material moving, military <sup>d</sup>	8	50.0% (n = 4)	50.0% (n = 4)	25.0% (n = 2)	75.0% (n = 6)	37.5% (n = 3)	62.5% (n = 5)	25.0% (n = 2)
Overall $\chi^2 P$		<b>0.346</b>		<b>&lt;0.001</b>		<b>0.009</b>		<b>0.294</b>

Chi Square *P*-value indicating bold statistical significance of the distribution of outcome variable responses by occupational category.

<sup>a</sup>Aggregate category includes specialized occupations in management, business, finance, science, legal, education, and the arts.

<sup>b</sup>Includes service industry and support professionals in health care, protection, and personal services.

<sup>c</sup>Aggregate category includes sales and office administrative support workers.

<sup>d</sup>Aggregate category of production-, transportation-, and construction-related occupations. SOC, standard occupational classification.

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**TABLE 4.** Odds Ratios for Job Perceptions and Need for Accommodations by PDs and SC

	Participant Perception That Job Harmful		Participant Belief That Job Change Needed		Participant Requested Accommodations		Accommodations at Work Granted	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
All								
High PD	<b>2.5</b>	<b>1.5–4.3</b>	<b>1.8</b>	<b>1.1–3.0</b>	<b>1.5</b>	<b>0.87–2.5</b>	0.92	0.53–1.6
Low SC	0.88	0.54–1.4	<b>1.6</b>	<b>1.0–2.6</b>	<b>1.9</b>	<b>1.2–3.2</b>	<b>1.9</b>	<b>1.2–3.1</b>
White								
High PD	2.3	0.84–6.3	2.0	0.74–5.4	2.5	0.78–7.7	1.5	0.51–4.5
Low SC	0.67	0.52–2.8	1.25	0.56–2.8	0.99	0.37–2.6	1.3	0.55–3.2
Black								
High PD	<b>3.2</b>	<b>1.3–9.8</b>	1.9	0.68–5.0	1.3	0.50–3.5	0.72	0.26–2.0
Low SC	0.41	0.13–1.3	<b>4.4</b>	<b>1.5–13.2</b>	1.6	0.57–4.3	1.9	0.67–5.7
Latina								
High PD	2.3	0.80–7.1	1.4	0.49–4.0	1.0	0.35–2.9	0.54	0.18–1.7
Low SC	0.66	0.21–2.0	0.58	0.20–1.6	2.4	0.76–7.8	2.0	0.65–6.1
Asian								
High PD	2.7	0.61–12.4	1.2	0.26–5.7	4.0	0.84–19.2	4.7	0.80–27.8
Low SC	1.5	0.38–6.0	1.3	0.34–4.7	1.2	0.28–5.6	0.59	0.09–3.9
Income > \$100,000								
High PD	3.6	0.85–15.2	0	0	3.8	0.64–23.6	0.71	0.08–6.3
Low SC	1.2	0.36–3.9	1.5	0.38–5.9	0.30	0.03–2.8	1.1	0.29–4.4
Income between \$50,000 and \$100,000								
High PD	<b>10.7</b>	<b>3.1–36.4</b>	2.6	0.96–7.0	1.6	0.58–4.4	1.2	0.44–3.4
Low SC	0.38	0.11–1.3	0.71	0.29–1.8	0.98	0.38–2.5	1.1	0.42–2.7
Income < \$50,000								
High PD	1.07	0.47–2.5	1.6	0.77–3.4	1.1	0.52–2.4	0.88	0.39–2.0
Low SC	1.2	0.48–2.9	1.6	0.69–3.6	1.7	0.69–4.1	1.4	0.57–3.4

Overall results and stratification by race/ethnicity and income. Bold values indicate statistically significant results by 95% CI. 95% CI, 95% confidence intervals; OR, odds ratio; PD, physical demands; SC, substantive complexity.

that suggest a positive relationship between having an extended tenure at a place of employment and receiving a job accommodation.<sup>25</sup>

When looking at differences by race/ethnicity, we found the association between a high physical demand score and perception of a harmful job was fairly uniform but highest among Black women. Much stronger was the association in Black women between a low SC job and belief that a job duty change was needed. We cannot be certain of the reasons for this finding, but analyses of job characteristics indicates that while the physical demand scores for Black and White women's jobs were nearly identical, Black women had a considerably lower mean substantive complexity score (mean Z score 0.22 for White participants vs –0.49 for Black;  $P < 0.001$ ) with greater classification of Black responders (63%) than White responders (34%) into a low substantive complexity job (results not shown). These between-ethnic differentials in job classification support previous work that show a distribution of SES characteristics (including work) differing significantly between Black and White mothers, even when they are recruited from the same source, and continue to point to inequalities in work opportunity and availability despite the ostensible similarities that might be assumed in populations in a single catchment area.<sup>17,26,27</sup>

Interestingly, the association between physical demand scores and perception of job harm was strongest among those in the middle-income category. Nevertheless, it was individuals in the highest income category with high physical demand scores that were the most likely to request a job accommodation. These higher earning individuals may be more likely to hold positions with more autonomy to empower them to ask for an accommodation. This is consistent with data that suggest that individuals who work in professional or managerial positions are more likely than those whose work was categorized as “semiskilled” or “unskilled” to request a job duty accommodation.<sup>23</sup>

Our study has several strengths. We were able to recruit participants from two clinical settings, providing us with a socioeconomically, racially, and occupationally diverse group of pregnant women. We also used a standardized method of comparing physical and psy-

chosocial work demands across a wide variety of occupations. However, our study is not without limitations. Our primary predictor and outcome variables were based on self-report and some of the data were incomplete because of participants' inability to complete the full surveys before being called in for their clinic appointments. Furthermore, the role of a patient's healthcare provider, and employers' prioritization of other factors like company size and personnel needs, while important in decisions related to accommodation of job duty change requests, were out of the scope of our analyses and should be addressed in future studies.

Although significant attention has been paid to workplace equity—including the creation of more generous parental leave policies and more explicit laws regarding sex discrimination and pregnancy—an incomplete safety net remains in the United States. The Pregnancy Discrimination Act and the Family and Medical Leave Act (FMLA) have been instrumental in ensuring that women of child-bearing age can remain in the workforce throughout their reproductive years. The Equal Employment Opportunity Commission (EEOC) announced its intention to ensure workplace compliance with the Pregnancy Discrimination Act and the Americans with Disabilities Act<sup>28</sup> and in 2015 the Supreme Court, in *Young v UPS*,<sup>29</sup> gave notice that employers will need to treat pregnant women requiring job modifications no differently than any other employee who may be injured, ill, or incapacitated.

The patchwork of federal and state laws designed to protect pregnant workers is complex, with vague definitions, discrepant interpretations of laws, and eligibility requirements that can leave many of them unprotected. For example, individuals who work part-time, in small businesses, or who are beginning new jobs are ineligible for FMLA. If a worker must take leave through FMLA too early in the pregnancy—due to complications of pregnancy or the need to avoid a potentially harmful workplace environment—they risk job loss if unable to return to the workplace when the 12 weeks of leave is complete, or if additional leave is needed during the post-partum period. Similarly, the Americans with Disabilities Act mandates reasonable accommodations

for workers with disabilities, including conditions related to pregnancy, as now defined by the EEOC, but requests for accommodations can be declined by the employer on the grounds that business necessity precludes their adoption.

To encourage patients to discuss potential needs for modified work during pregnancy, clinical care should include a thorough assessment of a patient's occupation, including potential hazards. Special care should be given to patients who work in physically demanding industries, including those service occupations, which at first glance may not seem to have high demands. For a clinician advising a patient on hazards at work and whether to seek work accommodations, a thorough discussion should include the following: whether the restriction is necessary; whether her pregnancy-related condition prevents performance of an "essential function" of her job; whether an accommodation in work duties are sufficient to mitigate risk (given incomplete knowledge of many workplace reproductive hazards); whether the employer has modified duty programs or policies for employees with temporary incapacity; whether an accommodation can be progressive in scope leading up to a leave of absence; and if the total time of pregnancy-related leave is likely to exceed 12 weeks. When writing a work restriction or accommodation note, medical certification should include the following: the capabilities and limitations of the pregnant worker, with awareness that in some cases medical details of the condition may not be released, while in others (such as FMLA leave) they may be required; the expected duration of the condition and restrictions; the worker's capacity to perform the position's essential functions; the specific limitations required; and recommended accommodations that would enable safe work.<sup>24</sup> Given that patients often rely on their pregnancy care providers to write accommodation letters requesting modified duty, further exploration should be made on how to provide these clinicians with the tools necessary to make these determinations.

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