

# Allegation of ethnic minorities from 1993–2008: An equal employment opportunity commission (EEOC) study

Juan Carlos Arango-Lasprilla<sup>a,\*</sup>, Jessica M. Ketchum<sup>b</sup>, Jessica Hurley<sup>c</sup>, Almaz. M. Getachew<sup>c</sup> and Kelli Williams Gary<sup>d</sup>

<sup>a</sup>*IKERBASQUE, Basque Foundation for Science, University of Deusto, Bilbao, Spain*

<sup>b</sup>*Department of Biostatistics and Center for Rehabilitation Science and Engineering (CERSE), Virginia Commonwealth University, Richmond, VA, USA*

<sup>c</sup>*Department of Rehabilitation Counseling, Virginia Commonwealth University, Richmond, VA, USA*

<sup>d</sup>*Department of Occupational Therapy, Virginia Commonwealth University, Richmond, VA, USA*

Received 29 March 2012

Accepted 25 September 2012

## Abstract.

**BACKGROUND:** Approximately 25% of working-aged Americans with disabilities work full or part time, yet still face discrimination despite the passing of the American's with Disabilities Act (ADA) over 20 years ago.

**OBJECTIVES:** To determine if the proportion of allegations of ADA Title I workplace discrimination with merit closed at any year between 1993 and 2008 differs among Whites, African Americans, Hispanics, and Asians; to determine if there was a change over time from 1993 to 2008 in merit closure rate within each race/ethnicity group; and to determine whether changes over time between 1993 and 2008 in the merit closure rate differ among the race/ethnicity groups.

**METHODS:** Logistic regression was used for this cross-sectional panel study to model the merit closure rate for each ethnic group from 1993 to 2008 using 318,587 charging parties from the EEOC database.

**RESULTS:** All ethnic groups exhibited significant changes over time in the merit closure rate. There were significant differences in the closure rates among the race/ethnicity groups specifically at closure years 1995–2000, 2002, 2003, and 2006. Finally, there was evidence that the trends in merit closure rates over time differed significantly among the race/ethnicity groups.

**CONCLUSIONS:** There was significant evidence that the proportion of claims closed with merit was significantly different among the racial/ethnicity groups.

Keywords: Disability, employment, discrimination, minorities

## 1. Introduction

There are around 54 million Americans with disabilities, or approximately 10% of the population and, a

staggering 72% of working age Americans are not in the work force and 21% live below the poverty line [1]. Of all vulnerable groups in America, people with disabilities (PWD) are still the poorest [2]. The high unemployment rates of PWDs also have a major impact on their physical and psychological wellbeing. In addition, employment has been identified as a vessel for financial independence [3], empowerment [4], and positive self-worth [5]. Therefore, work is critical for integration into society for people with disabilities [6].

---

\*Corresponding author: Juan Carlos Arango-Lasprilla, Ikerbasque Research, University of Deusto, Ikerbasque, Basque Foundation for Science, Avda de las Universidades 24, Bilbao 48007, Spain. Tel.: +34 94 413 90 03, ext 3261; E-mail: jcarango@deusto.es.

One of the identified causes as to why PWDs experience employment discrimination is the disability itself; however, other factors such as race and/or ethnicity are also thought to have a major impact on employability [9]. Persons from racial or ethnic minorities with disabilities experience double the discrimination; researchers have identified this trend as “double jeopardy” when disability status is also combined with racial or ethnic minority status [10]. It is projected that in the United States racial and ethnic minorities will reach 45% of the total population by the year 2050 [1]. Furthermore, it is also expected that the proportion of people living with disabilities will also increase. Given the expected increase for both racial and ethnic minorities as well as people with disabilities, it is important to investigate circumstances surrounding this double jeopardy status in relation to disability employment discrimination.

Twenty years after the passing of the Americans with Disabilities Act (ADA), significant economic disparities still exist between PWDs and those without disabilities [11]. In 2008, the American Community Survey indicated that only 39.5% of PWDs were employed compared to 79.9% of people without disabilities [12]. Although Title I of the ADA prohibits employment discrimination against people with disabilities, PWDs continue to experience employment discrimination for multiple reasons [11]. Studies involving ADA Title I claims of employment discrimination indicate that the most common charges have been unlawful termination, failure to provide reasonable accommodation, discrimination in the terms/conditions of employment, disability harassment, and discrimination in the hiring process. Employers have mistakenly pointed to the assumed high cost of accommodations on the job [13] and lower productivity due to functional limitations [14] as reasons for not employing people with disabilities. Even after overcoming discrimination and when PWDs actually do manage to become employed and maintain employment, there are still large income gaps compared to people without disabilities. For example, the annual median income for PWDs is \$39,600 compared to \$61,200 for people without disabilities [15]. Furthermore, while Title I of the ADA has improved employee outcomes for PWDs; employment discrimination continues to play a major role.

Today, according to our review of the literature, over 80 studies have investigated the characteristics of employees (or charging parties) and employers involved in ADA Title I allegations of employment discrimination based on disability as well as each allegation's

merit status determination as found by the Equal Opportunity Employment Commission (EEOC). These studies were conducted using the EEOC's ADA Title I database which contains all Title I allegations filed for the lifetime of the ADA from 1993 to 2008 [16–37].

The majority of these EEOC studies have explored race/ethnicity allegations in the context of a larger allegation type (e.g., disability type such as back impairment, multiple sclerosis, mental retardation, deafness, or depression; discrimination issue such as wrongful firing, disability harassment, or failure to provide a reasonable accommodation; or employer industry such as health care, manufacturing, or education). However, there have only been two studies completed so far which have focused solely on race/ethnicity allegations. Lewis et al. [38] and Hurley et al. [39] examined charging party and employer characteristics, respectively, between Title I allegations filed by Whites and African Americans. Lewis et al. [38] reported the following: Whites filed Title I allegations under more impairments than did African Americans; African Americans more often filed Title I allegations under chronic diseases such as asthma, diabetes, HIV/AIDS, and other blood disorders more than Whites; African Americans more often filed Title I allegations under more of a variety of employment discrimination issues than did Whites; African Americans more often filed Title I allegations under disciplinary issues such as terms and conditions of employment, suspension, discipline, harassment, promotion, and assignment than did whites; and African Americans were typically 35 to 54 years old when they filed Title I allegations while Whites typically were much older when they filed. Hurley et al. [39] reported: African Americans and Whites filed Title I allegations under an equal number of employer industries; African Americans filed Title I allegations under more paraprofessional and professional industries, while Whites filed more Title I allegations under more blue collar industries; Whites filed more Title I allegations under more small- to medium-sized employers, while African Americans filed more Title I allegations under more large to extra-large employers; African Americans filed Title I allegations in the south while Whites filed more Title I allegations in the West, Northeast, and Midwest. Although these studies have added much to the race and employment discrimination literature, there is still a paucity of such literature. Therefore, there is a need for further exploration of race and disability employment discrimination.

The present study is a retrospective cross-sectional panel design and seeks to investigate all ADA Title I

allegations made and closed with merit by African Americans, Asian Americans, Hispanics, Native Americans and Whites across the lifetime of the ADA (1992 to 2008). Investigating these changes over time will provide answers to emerging issues which may affect certain racial and ethnic minority groups and employment discrimination. More specifically, this study will address the following three aims: (1) Does the proportion of ADA Title I workplace discrimination allegations closed with merit differ between Whites, African Americans, Hispanics, and Asians at specific time points between 1993 and 2008; (2) does the proportion of ADA Title I workplace discrimination allegations closed with merit change over time from 1992 to 2008 for each race/ethnic group; and (3) Do the changes over time between 1993 and 2008 in the proportion of ADA Title I allegations of workplace discrimination closed with merit differ among Whites, African Americans, Hispanics, and Asians?

## 2. Methods

### 2.1. Participants

The equal employment opportunity commission (EEOC) has a database, called the integrated mission system that holds allegations filed under all legislation in its jurisdiction, including the Americans with disabilities act (ADA). From this database, all ADA Title I allegations were placed into a separate database by researchers at Virginia Commonwealth University for use by the national EEOC, ADA research project which is housed at Virginia Commonwealth University (VCU). An interagency agreement between the EEOC and VCU allowed these data to be studied under the condition that they be de-identified.

Within the project database, the person who files the allegation of disability employment discrimination under Title I of the ADA (or the ADA's employment provisions) is called the "charging party" and the employer against whom the allegation is filed is called the "respondent". In addition, the unit of measure within the project database is an allegation of employment discrimination and not the person with a person with a disability who filed it under Title I of the ADA. the project database contains 402,291 ADA Title I workplace allegations with the following categories: 44 charging party disability types (e.g., cancer, back impairment, cerebral palsy, alcoholism, or depression; charging party gender (i.e., m,f, or null); charging party

age (i.e., 15–87 years with a mode of 44 years); charging party race (i.e., white, African American, Hispanic/Mexican, Asian, native American/Alaskan native, mixed, other, and null); charging party discrimination issue (e.g., 41 types including hiring, firing, demotion, harassment, or reasonable accommodation); employer or respondent industry (e.g., 21 types based on the north American industry classification system including agriculture, construction, retail trades, transportation/warehousing, construction, and professions/scientific/technical); employer or respondent size (i.e., 15–100 employees, 101–200 employees, 201–500 employees, 501+ employees, or null); employer or respondent region (i.e., based on us census regions west, northeast, Midwest, south, foreign and territories, or null); and allegation resolution type (i.e., closed by the EEOC with merit which means it determined discrimination to have occurred or closed by the EEOC without merit which means it determined no discrimination to have occurred. all ADA Title I allegations filed in acts of retaliation or that were the result of filing or duplication errors were excluded from the project database.

Because the current study seeks to explore the connection between race, disability, and employment discrimination under ADA Title I, data from each of the project database categories were evaluated descriptively as to its usefulness in shedding light on this focus. Due to a relatively high rate of nulls in the database category, employer region, it was eliminated.

In this sample, 69.4% ( $n = 221,191$ ) of the charging parties were White, 22.4% ( $n = 71,385$ ) were African American, 6.9% ( $n = 21,840$ ) were Hispanic, and 1.3% ( $n = 4,171$ ) were Asian. The characteristics of the sample are summarized in Tables 1 and 2, overall and by race/ethnicity status. The percentage of claims was evenly distributed among male (51.7%) and female (48.3%) charging parties with the average age of the sample 43.7 years ( $SD = 10.15$ ). Then majority of charging party issues were classified as discharge (31.6%), other (28.7%), or reasonable accommodations (18.0%). Employer size was predominantly small with 15 to 100 workers (32.2%) or large with more than 500 workers (44.6%) and employers tended to be located in the Southeast (23.7%), Midwest (23.7%), or Southwest (16.6%). Most employer industry types were service producing (75%) with over 60% in manufacturing (20.7%), education and health services (19.1%), or trade, transportation, and utilities (19.0%). Most cases were closed without merit (77.0%), regardless of race/ethnicity.

Table 1  
Description of nominal characteristics of the EEOC sample by charging party race/ethnicity

	White		African American		Hispanic		Asian		Overall	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Charging party sex										
Male	116114	52.58	33920	47.58	12289	56.32	2165	52.03	164488	51.71
Female	104703	47.42	37365	52.42	9530	43.68	1996	47.97	153594	48.29
(Missing)	(374)		(100)		(21)		(10)		(505)	
Charging party issue										
Discharge	70223	31.75	22962	32.17	6441	29.49	1101	26.40	100727	31.62
Reasonable accommodations	41015	18.54	11704	16.40	3743	17.13	779	18.68	57241	17.97
Terms/conditions	17894	8.09	6809	9.54	1910	8.75	441	10.57	27054	8.49
Harassment	16339	7.39	5874	8.23	2197	10.06	380	9.11	24790	7.78
Hiring	13136	5.94	3016	4.22	1034	4.73	228	5.47	17414	5.47
Other	62584	28.29	21020	29.45	6515	29.83	1242	29.78	91361	28.68
Employer size										
15–100 workers	69695	32.91	20778	30.23	7021	33.35	1009	24.99	98503	32.24
101–200 workers	26031	12.29	8078	11.75	2388	11.34	389	9.64	36886	12.07
201–500 workers	23458	11.08	8135	11.84	1950	9.26	407	10.08	33950	11.11
501 or more workers	92565	43.71	31737	46.18	9696	46.05	2232	55.29	136230	44.58
(Missing)	(9442)		(2657)		(785)		(134)		(13018)	
Employer region										
New England	2315	1.05	281	0.39	90	0.41	43	1.03	2729	0.86
Northeast	9027	4.08	3132	4.39	1747	8.00	162	3.88	14068	4.42
Mid-Atlantic	23200	10.49	7891	11.05	399	1.83	214	5.13	31704	9.95
Southeast	51206	23.15	21801	30.54	2075	9.50	409	9.81	75491	23.70
Midwest	55660	25.16	17101	23.96	2108	9.65	654	15.68	75523	23.71
Southwest	32466	14.68	11516	16.13	8633	39.53	406	9.73	53021	16.64
Great plains	9384	4.24	2572	3.60	305	1.40	85	2.04	12346	3.88
Rocky mountain	7756	3.51	1021	1.43	1354	6.20	140	3.36	10271	3.22
Pacific	25160	11.37	5338	7.48	4895	22.41	1900	45.55	37293	11.71
Northwest	5002	2.26	722	1.01	233	1.07	158	3.79	6115	1.92
Foreign/military	15	0.01	10	0.01	1	< 0.01	0	0.00	26	0.01
Employer industry type										
Natural resources and mining	2957	1.55	770	1.24	462	2.49	65	1.82	4254	1.55
Construction	4652	2.44	1070	1.72	439	2.37	54	1.52	6215	2.26
Manufacturing	40406	21.18	12307	19.82	3560	19.19	721	20.24	56994	20.72
Trade, transportation, and utilities	36787	19.28	11013	17.73	3478	18.75	566	15.89	51844	18.85
Information	8885	4.66	3085	4.97	745	4.02	148	4.15	12863	4.68
Financial activities	11204	5.87	3473	5.59	839	4.52	210	5.89	15726	5.72
Professional and business services	16331	8.56	5654	9.10	1503	8.10	276	7.75	23767	10.64
Education and health services	35978	18.86	12406	19.98	3254	17.54	765	21.47	52403	19.05
Leisure and hospitality	6659	3.49	2039	3.28	530	2.86	128	3.59	9356	3.40
Public administration	19299	10.12	7437	11.98	2680	14.45	420	11.79	29836	10.85
Other services	7631	4.00	2850	4.59	1061	5.72	210	5.89	11752	4.27
(Missing)	(30399)		(9281)		(3289)		(608)		(43577)	
Employer industry type II										
Goods producing	48015	25.17	14147	22.78	4461	24.05	840	23.58	67463	24.53
Service producing	142777	74.83	47957	77.22	14090	75.95	2723	76.42	207547	75.47
(Missing)	(30399)		(9281)		(3289)		(608)		(43577)	
Merit closure										
Yes	52896	23.91	15154	21.23	4234	19.39	910	21.82	73194	22.97
No	168295	76.09	56231	78.77	17606	80.61	3261	78.18	245393	77.03

## 2.2. Measures

The primary outcome variable of interest was a dichotomous variable indicating whether or not the ADA workplace discrimination claim by the charging party

was closed with merit. Demographic characteristics included in the database regarding the charging party include age (in years), gender, and race/ethnicity. Characteristics regarding the claim filed include issue of claim and the year the claim was closed. Characteris-

Table 2  
Description of age of the sample by charging party race/ethnicity

Charging party age (years)	N	Mean	SD	Median	IQR	Range	Missing
White	206688	44.23	10.29	44.00	37 to 51	15 to 79	14503
African American	65372	42.32	9.46	42.00	36 to 49	16 to 77	6013
Hispanic	20108	42.97	10.19	43.00	36 to 50	16 to 75	1732
Asian	3873	45.50	10.72	45.00	38 to 53	18 to 75	289
Overall	296041	43.74	10.15	44.00	37 to 51	15 to 79	22546

SD = Standard Deviation.

tics regarding the employer include size of company, Department of Energy (DOE) region, and North American Industry Classification System (NAICS) industry type. The primary predictor variables of interest were race/ethnicity and year the case was closed.

Age was analyzed as a continuous variable, while gender and race/ethnicity were modeled as nominal variables. Issue of claim represents the reason the charging party was filing a claim and was categorized into 6 groups: Discharge, Reasonable Accommodations, Terms/Conditions, Harassment, Hiring, and Other. This categorization was chosen to represent the 5 most frequently occurring issues, with all other issues grouped together. Employer size was as a nominal variable with 4 levels: 15 to 100 employees, 101 to 200 employees, 201 to 500 employees, and more than 500 employees. Employer NAICS industry type was re-categorized into 11 groups using the NAICS Alternate Aggregation Structure (see [http://www.census.gov/eos/www/naics/history/docs/cm\\_2.pdf](http://www.census.gov/eos/www/naics/history/docs/cm_2.pdf)). Closure year was modeled as a nominal variable.

### 2.3. Statistical analyses

The characteristics of the sample were described overall and separately for the groups of claims with and without merit using standard summary measures (counts/percentages for nominal variables and means/standard deviations [SD] or medians/interquartile ranges [IQRs] for continuous variables). A single logistic regression model was used to model the proportion of claims closed with merit as a function of race/ethnicity, year of closure, and the race/ethnicity by year interaction effect. In addition, the model adjusted for the aforementioned charging party, claim, and company characteristics. This model was used to address all of the aims for this study.

For aim 1, 14 overall comparisons were tested using 3 degree of freedom chi-square tests within the logistic regression model to determine if the merit closure rate differed between the race/ethnicity groups at each year between 1993 and 2008, except for 2004 and 2005. A

Bonferroni adjustment of  $\alpha = 0.05/14 = 0.0036$  was used to control for multiple comparisons and maintain an overall Type I error rate of  $\alpha = 0.05$ . For years where the overall 3 degree of freedom chi-square test comparing the race/ethnicity groups was significant ( $p$ -value  $< 0.0036$ ) 6 pairwise comparisons of the merit closure rate among the race/ethnicity groups were further tested using single degree of freedom chi-square tests within the logistic regression model. A Bonferroni adjustment of  $\alpha = 0.05/6 = 0.0083$  was used to control the Type I error rate. Odds ratios and 95% confidence intervals were used to compare the odds of a claim closed with merit versus a claim closed with no merit among the four racial/ethnic groups.

For aim 2, four overall comparisons were conducted using 13 degree of freedom chi-square tests within the logistic regression model to determine if there were changes in the merit closure rate over time for each of the racial/ethnicity groups. A Bonferroni adjustment of  $\alpha = 0.05/4 = 0.0125$ . If the overall hypothesis test was significant for any race/ethnicity group then the trends were described over time within the specific race/ethnicity group by quantifying the changes in the odds of closure rate between different years. The general trend in the unadjusted merit closure rate will be used to generate 4 or 5 time segments to more easily describe the trend.

For aim 3, the race/ethnicity by year interaction effect in the logistic regression model was examined at a significance level of  $\alpha = 0.05$ . A significant interaction effect would be indicative that the changes in the merit closure rate over time differed significantly among the race/ethnicity groups.

## 3. Results

### 3.1. Preliminary analysis

Initially, unadjusted preliminary analyses were conducted to assess the changes merit closure rates over time for each race/ethnicity group, without controlling

Table 3  
Unadjusted merit closure rates across charging party race/ethnicity by time

Year	White		African American		Hispanic		Asian		Overall	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
1993	1477	32.16	417	31.52	76	23.10	9	20.00	1979	31.46
1994	2489	25.18	625	22.45	206	21.82	28	22.22	3348	24.37
1995	2783	16.46	711	14.60	272	17.46	51	18.81	3817	16.17
1996	3269	14.67	722	11.03	322	14.70	42	11.60	4355	13.88
1997	3679	16.11	941	13.84	276	13.24	53	12.93	4949	15.40
1998	4458	18.99	1073	14.51	314	14.46	113	27.70	5958	17.81
1999	5406	24.99	1493	18.58	445	19.33	122	22.80	7466	22.97
2000	6544	29.92	1986	25.90	559	22.01	142	31.77	9231	28.38
2001	6330	29.44	2436	31.12	711	26.84	129	26.11	9606	29.58
2002	5904	26.85	1823	23.72	573	19.20	121	24.49	8421	25.40
2003	3905	26.05	1186	23.46	457	23.06	43	12.76	5591	25.00
2006	2102	31.38	667	33.65	11	40.74	17	16.83	2797	31.76
2007	2421	37.26	577	31.44	10	27.78	28	33.33	3036	35.92
2008	2129	35.27	497	31.46	2	4.76	12	21.05	2640	34.22

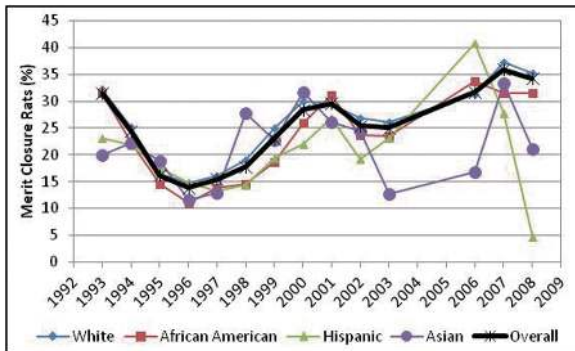


Fig. 1. Unadjusted trends in merit closure rates over time by race/ethnicity group. (Colours are visible in the online version of the article; <http://dx.doi.org/10.3233/WOR-121583>)

for any other characteristics. Irrespective of year of closure, there was significant evidence that the proportion of claims closed with merit was significantly different among the racial/ethnicity groups ( $\chi^2_3 = 403.0$ ,  $p < 0.0001$ ; Cramer's  $V = 0.0352$ ). As can be seen from the bottom of Table 1, the trend was such that Whites had the highest merit closure rate (24.0%), followed by Asians (22.1%), and African Americans (21.3%), with Hispanics having the lowest merit closure rate (19.4%). The unadjusted merit closure rates by year for each race/ethnicity and overall are plotted in Fig. 1 and summarized in Table 3. In general, there was a decreasing trend in merit closure rates from 1993 through 1996 followed by an increasing trend from 1996 through 2001. After 2001, Whites and African Americans exhibit slight decreases in merit closure rates through 2003 followed by increases through 2008. Hispanic and Asians had rather different trends after 2001 than Whites and African Americans and showed greater de-

viations from the overall trend over time than the other race/ethnicity groups. Asians had considerably lower merit closure rates than other groups in 1993, 2003, 2006, and 2008 and higher rates in 1998. Hispanics, on the other hand, were notably lower than the other groups in 1993, 2001, 2008, and 2009 and higher in 2006.

### 3.2. Aim 1

The tests for differences in the closure rates among the race/ethnicity groups at each year are summarized in Table 4. Using a Bonferroni adjusted significance level of  $\alpha = 0.0036$  there were significant differences in the closure rates among the race/ethnicity groups for closure years 1995 to 2000, and 2002, 2003, and 2006. Pairwise comparisons of the odds of closure with merit (versus closure without merit) were tested between the race/ethnicity groups at these significant years using a Bonferroni adjusted significance level  $\alpha = 0.0083$ ;  $p$ -values for these tests can be seen in Table 4. The odds ratios comparing the odds of closure with merit (versus closure without merit) among the race/ethnicity groups that were statistically significant are summarized with 95% confidence intervals in Table 5. Odds ratios greater than 1 indicate that the odds of closure with merit are greater for the first group as compared to the second group, while odds ratios smaller than one indicate the odds of closure with merit are smaller for the first group as compared to the second group; confidence intervals not including 1 are statistically significant at the 5% level of significance. For example, the odds of closure with merit were 14% to 49% greater for Whites as compared to African Americans during the years of 1996 to 2000.

Table 4  
(Aim 1) Global and individual comparisons for differences in merit closure rates among race/ethnicity by time

Year	F*	p-value	W vs. AA	W vs. H	W vs. A	AA vs. H	AA vs. A	H vs. A
			p-value	p-value	p-value	p-value	p-value	p-value
1993	3.59	0.0130						
1994	2.88	0.0347						
1995	4.73	0.0027†	0.0754	0.0197	0.0411	0.0018‡	0.0117	0.3760
1996	14.16	< 0.0001†	< 0.0001‡	0.4290	0.5397	< 0.0001‡	0.3315	0.3907
1997	6.65	0.0002†	0.0039‡	0.0022‡	0.0221	0.2194	0.1308	0.3774
1998	36.83	< 0.0001†	< 0.0001‡	< 0.0001‡	< 0.0001‡	0.0962	< 0.0001‡	< 0.0001‡
1999	41.27	< 0.0001†	< 0.0001‡	< 0.0001‡	0.2605	0.2452	0.0213	0.1363
2000	24.53	< 0.0001†	< 0.0001‡	< 0.0001‡	0.0510	0.0002‡	0.0008‡	< 0.0001‡
2001	2.27	0.0783						
2002	18.32	< 0.0001†	0.0446	< 0.0001‡	0.0012‡	< 0.0001‡	0.0077‡	0.7979
2003	10.39	< 0.0001†	0.0104	0.7640	< 0.0001‡	0.2093	< 0.0001‡	< 0.0001‡
2006	5.17	0.0014†	0.0368	0.0676	0.0063‡	0.1228	0.0019‡	0.0023‡
2007	4.21	0.0055						
2008	1.86	0.1333						

\*F-statistics have 3, 247×10<sup>3</sup> degrees of freedom.

† Indicates statistically significant using Bonferroni adjustment of α = 0.0036.

‡ Indicates statistically significant using Bonferroni adjustment of α = 0.0083.

Table 5  
(Aim 1) Significant odds ratios for merit closure between race/ethnicity groups by time

Year	W vs. AA		W vs. H		W vs. A		AA vs. H		AA vs. A		H vs. A	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
1995							0.764	(0.646, 0.904)				
1996	1.360	(1.236, 1.496)					0.696	(0.594, 0.814)				
1997	1.136	(1.042, 1.238)	1.256	(1.085, 1.453)								
1998	1.341	(1.236, 1.454)	1.528	(1.327, 1.761)	0.528	(0.415, 0.672)			0.394	(0.307, 0.505)	0.345	(0.262, 0.454)
1999	1.487	(1.381, 1.601)	1.373	(1.214, 1.553)								
2000	1.195	(1.116, 1.280)	1.512	(1.349, 1.695)			1.265	(1.117, 1.433)	0.663	(0.522, 0.842)	0.524	(0.406, 0.677)
2002			1.501	(1.334, 1.690)	1.559	(1.191, 2.042)	1.398	(1.230, 1.588)	1.452	(1.103, 1.910)		
2003					2.677	(1.832, 3.911)			2.384	(1.623, 3.502)	2.623	(1.763, 3.902)
2006					2.248	(1.257, 4.022)			2.539	(1.411, 4.570)	5.016	(1.780, 14.136)

W = White; AA = African American; H = Hispanic; A = Asian; OR = Odds Ratio; CI = Confidence Interval.

### 3.3. Aim 2

There were significant changes in the proportion of cases closed with merit over time for each for the race/ethnicity groups: White  $F(13, 247 \times 10^3) = 308.34, p < 0.0001$ ; African American  $F(13, 247 \times 10^3) = 120.0, p < 0.0001$ ; Hispanic  $F(13, 247 \times 10^3) = 19.49, p < 0.0001$ ; and Asian:  $F(13, 247 \times 10^3) = 7.98, p < 0.0001$ . Based on the general trend of the plot, odds ratios were computed comparing the following years: 1996 to 1993, 2001 to 1996, 2003 to 2001, and 2009 to 2003. The estimated odds ratios and 95% confidences are summarized by race/ethnicity and overall in Table 6. Odds ratios greater than 1 indicate increases in the odds of merit closure rates over time and odds ratios smaller than 1 are indicative of decreases over time.

Whites, African Americans, and Hispanics all showed significant decreases in the odds of closure with merit from 1993 to 1996 (ORs between 0.269 and 0.580;  $p$ 's  $\leq 0.0010$ ) while Asians showed nominal but non-significant decreases (OR = 0.634;  $p = 0.2993$ ). All race/ethnicity groups showed significant increases in the odds of closure with merit from 1996 to 2001 (ORs between 2.167 and 3.499;  $p$ 's  $\leq 0.0003$ ). Whites, African Americans, and Asians all showed significant decreases in the odds of closure with merit from 2001 to 2003 (ORs between 0.395 and 0.862;  $p$ 's  $\leq 0.0001$ ) while Hispanics showed non-significant decreases (OR = 0.915;  $p = 0.2806$ ). Whites, African Americans, and Asians all showed significant increases in the odds of closure with merit from 2003 to 2009 (ORs between 1.477 and 2.218;  $p$ 's  $\leq 0.0376$ ) while Hispanics showed non-significant decreases (OR = 0.780;  $p = 0.7576$ ).

Table 6  
(Aim 2) Changes in the odds ratios for merit closure over time by race/ethnicity

	1996 vs. 1993		2001 vs. 1996		2003 vs. 2001		2009 to 2003	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Whites	0.355	(0.328, 0.385)†	2.481	(2.351, 2.619)†	0.862	(0.816, 0.911)†	1.477	(1.374, 1.589)†
African/Americans	0.269	(0.230, 0.315)†	3.499	(3.156, 3.879)†	0.740	(0.672, 0.815)†	1.507	(1.312, 1.731)†
Hispanics	0.580	(0.420, 0.802)†	2.167	(1.836, 2.558)†	0.915	(0.778, 1.076)	0.780	(0.161, 3.787)
Asians	0.634	(0.269, 1.498)	2.278	(1.466, 3.538)†	0.395	(0.253, 0.615)†	2.218	(1.047, 4.699)†
Overall	0.433	(0.343, 0.547)†	2.554	(2.266, 2.888)†	0.693	(0.614, 0.782)†	1.401	(0.903, 2.173)

† Indicates statistically significant using Bonferroni adjustment of  $\alpha = 0.05$ .

Table 7

(Aim 3) Pairwise comparisons in trends over time between race/ethnicity groups

Year	1996 vs. 1993	2001 vs. 1996	2003 vs. 2001	2009 to 2003
	<i>p</i> -value	<i>p</i> -value	<i>p</i> -value	<i>p</i> -value
W vs. AA	0.0020†	< 0.0001†	0.0070†	0.8033
W vs. H	0.0039†	0.1279	0.4995	0.4286
W vs. A	0.1882	0.7055	0.0006†	0.2911
AA vs. H	< 0.0001†	< 0.0001†	0.0278†	0.4157
AA vs. A	0.0545	0.0629	0.0066†	0.3212
H vs. A	0.8493	0.8357	0.0005†	0.2416

† Indicates statistically significant using Bonferroni adjustment of  $\alpha = 0.05$ .

W = White; AA = African American; H = Hispanic; A = Asian.

### 3.4. Aim 3

There was evidence that the trends in merit closure rates over time were significantly different across the four race/ethnicity groups ( $F(39, 247 \times 10^3) = 8.29, p < 0.0001$ ). The changes over time using the 4 time segments examined in the aim 2 were compared between the race/ethnicity groups, after controlling for charging party, claim, and company characteristics; the *p*-values from these tests are summarized in Table 7.

From 1993 to 1996, Whites (OR = 0.36) and African Americans (OR = 0.27) showed significantly greater decreases in the odds of merit closure over time as compared to Hispanics (OR = 0.58), and African Americans showed significantly greater decreases in the odds of merit closure as compared to Whites. From 1996 to 2001, African Americans (OR = 3.50) showed significantly greater increases in the odds of merit closure over time as compared to Whites (OR = 2.48) and Hispanics (OR = 2.17). From 2001 to 2003, Asians showed significantly greater decreases in the odds of merit closure over time as compared to Whites (OR = 0.86), African Americans (OR = 0.74), and Hispanics (OR = 0.92) and African Americans showed significantly greater decreases in the odds of merit closure over time as compared to Whites and Hispanics.

Finally, from 2003 to 2009, there were no significant differences in the increases in the odds of merit closure over time between the race/ethnicity groups.

### 3.5. Other characteristics

Looking at the covariates that were adjusted for in the model, all were significantly associated with merit closure rate: charging party age ( $p < 0.0001$ ), charging party sex ( $p = 0.0021$ ), issue ( $p < 0.0001$ ), employer size ( $p < 0.0001$ ), employer region ( $p < 0.0001$ ), and NAICS ( $p < 0.0001$ ).

## 4. Discussion

The purpose of the present study was to determine if Whites, African Americans, Hispanics, and Asians exhibited differences in the merit closure rate of allegations of ADA Title I workplace discrimination with merit closed between 1993 and 2008. Based on the results of this study we found the following: There were significant differences in merit closure rates among the race/ethnicity groups at closure years 1995–2000, 2002, 2003, and 2006, (2) all race/ethnic groups exhibited significant changes over time from 1993–2008, and (3) the changes over time from 1993–2008 were significantly different among the race ethnicity groups. These results highlight discernible differences between the majority and minority subgroups with regard to employment discrimination for people with disabilities.

In regard to Aim 1, the current study found statistically significant differences in the proportion of ADA Title I workplace discrimination allegations that were closed with merit at specific years between 1993 and 2008 among Whites, African Americans, Hispanics, and Asians. The highest unadjusted merit closure rate was among Whites (24%; Table 1), regardless of closure year. The potential to have a higher



merit closure rate may be related to a higher amount of filing allegations overall. McMahon, Roessler, Rumrill et al. [32] highlighted that hiring allegations were most frequently filed by charging parties who identified themselves as White. These results included non-hiring allegations, as well. Likewise, Lewis et al. [38] found that Whites filed more allegations of Title I employment discrimination across more impairments compared to any other race/ethnicity group. Therefore, a higher proportion of allegations initially filed can lead to a higher percentage of claims that were closed with merit.

Another salient feature regarding these findings is, regardless of closure year, Asians and African Americans had the second and third, respectively highest unadjusted merit closure rate (22% and 21%) and Hispanics having the lowest (19%). There are a few plausible explanations for these findings. Although evidence has shown that Asian Americans are less likely to file employment discrimination allegations [30], the higher proportion of merit closures may be indicative of the type of occupational characteristics that are more prevalent among the minority group compared to African Americans and Hispanics. Asian Americans have been perceived as the 'model minority group' by many in the US due to their overall educational and career status despite being a minority in the US [40] and as compare to other minority groups many have obtained careers, or as immigrants have entered the US, as physicians, dentists, pharmacists, scientists, and engineers representing jobs at the high end of the occupational spectrum [41]. Speculating that many of the allegations filed by Asian Americans may come from those in higher profile careers, the likelihood that the case would fare in favor of the charging party is highly probable. Hispanics, however, who had the lowest rate of merit closures, are plagued by lower educational attainment and a higher concentration of lower wage jobs [42]. Although the type of job does not determine whether a merit case is awarded or not, it may influence a lesser amount of allegations filed. Additionally, the language barrier that is more often experienced by Hispanics as compared to African Americans can potentially lead to less filing of discrimination allegations; thus, less allegations closed with merit.

When controlling for other predictor variables in the model (Tables 4 and 5) differences among the groups were noted as significant at specific years, but not all years. While lack of a difference count be indicative of no difference, it could also be due to low power. Notably, for the years where differences were identified,

Whites consistently had significantly higher closure rates than African Americans (1996–2000), Hispanics (1997–2002), and Asians (2002–2006), but did have significantly lower rates than Asians in 1998. In addition, African Americans had significantly lower merit closure rates than Asians in 1995 and 1996, but significantly higher rates in 2000 and 2002. When compared to Asians, African Americans had significantly lower closure rates in 1998 and 2000, but significantly higher rates in 2002, 2003 and 2006. Finally, when Hispanics were compared to Asians, Hispanics had significantly lower merit closure rates in years 1998 and 2000 but significantly higher rates in 2003 and 2006.

With respect to Aim 2, the current study extended the findings related to the difference in proportion of merit closures for the various racial/ethnic groups a step further to examine the change over time in the proportion of ADA Title I allegations closed with merit. As noted, there were significant changes over time for each of the race/ethnicity groups examined. Specifically, there were precipitous changes in the Asian subgroup between the years 1997 and 1998, as well as 2002 and 2006. The first spike was between the years 1997 and 1998; whereas, there was a notable increase in merit closures. From 2002 to 2003 a dramatic decrease of merit closures was indicated, followed by the most drastic decline in 2006. The instability in the merit closure rates may be attributed to many factors. Most notably are cultural factors related to Asian Americans; whereas, they are less likely to file formal complaints [30]. Therefore, if there was an increase in merit closures by the Asian American group, then the discrimination claims were probably more of a grave nature.

There was a gradual decline of merit closure rates over time for Hispanics, until 1998 when the percentage started to increase slightly from 1998 to 2001. After 2001, there was some substantial variability from 2002 and 2008. An extremely notable decrease of merit closures was indicated in 2008. Clearly, something odd transpired during those times. One plausible explanation could be the substantial changes in classification of Hispanics on federal documents [43]. This can be problematic when filling out federal forms such as in the U.S. Census or filing an allegation of employment discrimination with the EEOC. For instance, a charging party who is originally from Honduras who also happens to be African American, would be unable to choose between the Hispanic or African American categories. Likewise, the term, "Mixed", does not apply to this person, as he or she is African American only.

Because the term, “Hispanic”, is applied so broadly to people from Spanish cultures, there may be some unreliability in charging parties who did or did not identify themselves as, “Hispanic” and based their choice on their own best estimate. Hispanics are also another subgroup of minorities that have been known to be least likely to file allegation complaints similar to the Asian American subpopulation. McMahon et al. [32] suggested Hispanics may have higher expectation of negative outcome regarding the utility of their allegations of discrimination in the hiring process. Thus, it can be surmised that Hispanics believe that it is not worth the trouble to jeopardize their job and go through the arduous process of filing a complaint with a higher likelihood of a negative outcome. Moss et al. [44] reported that for psychiatric disabilities in particular, being Hispanic significantly reduces the likelihood of receiving a benefit from an employment discrimination case. Specifically, the odds ratios indicate that Hispanics were nearly four times less likely to receive a benefit than non-Hispanics.

For the African American community, there was a significant decline of merit closures from 1993 to 1996. After 1996, the trend of merit closures for African Americans steadily increased until 2001. Then there was a relatively sharp decline beginning in 2002. There was a sharp rise in rates again in 2006 and rates remained steady until 2008. It is difficult to determine if there were any distinct historical events that may have influenced the trends of allegations closing with merit among African Americans. However, Lewis et al. [38] and Hurley et al. [39] suggested that any decline in allegations may be related to African Americans propensity to file under the Civil Rights Act of 1964 due to historical significance as opposed to filing under ADA Title 1. Potentially, the impairment characteristics of charging parties who are African American may affect the trend of allegations for this minority group. Conyer, Boomer, and McMahon [22] noted that a disproportionate number of African Americans filed HIV/AIDS employment discrimination allegations. As time progressed from 1993 through 2008, medical advances allowed more workers to return to work with the diagnoses of HIV/AIDS. This surely created a ripe environment for employment discrimination allegations to be filed.

Results indicate that merit closure rates for Whites dramatically decreased between 1993 and 1996, and then started to gradually increase until 2008. There were a relatively high percentage of merit closures for Whites in 2005 and rates fluctuated from that year un-

til 2008. The gradual increase for Whites closer to beginning years that allegations were being filed and awarded can be attributed to the growing knowledge about the law and accessibility to detailed information about filing. It is well known that Whites disproportionately benefitted from filing ADA Title 1 hiring-related allegations [45] and this group was probably some of the first to take advantage of the new law and continued to increasingly file due to more optimistic in the outcome of the process. In addition, a few landmark court cases that clarified ADA Title 1 law and possibly influenced an influx of filing allegations in the 21<sup>st</sup> century.

Variability of merit closure rates overall could be influenced due to backlog issues for ADA Title 1 allegations. Moss et al. [44] noted that the process for many ADA Title 1 allegations resulting in closure of merit or non-merit status could have taken an exceptionally long period of time due to backlog (but the exact years of backlog are difficult to determine because the dataset collects closure year and not filing year). The fact that backlog exists which could have slowed the charge process for anyone filing and possibility lead to meritorious claims of discrimination being dismissed without an adequate review by EEOC personnel. Additionally, any variability in cases may be due to them possibly being dully file under both Title IV and Title 1 if racial discrimination and disability discrimination both took place, particularly for Asians, Hispanics, and African Americans.

In 1999, a series of three Supreme Court cases called “The Sutton Trilogy” narrowed the ADA definition of disability, thereby making it more difficult for a charging party to be covered under the Act and to then receive a merit resolution [46]. In regard to Aim 3 of the current study, by looking at the combined number of race allegations with a merit resolution for each year (See Table 2), one can see that after 2001, the number of cases with a merit resolution steadily declines. Because case closure backlog exists at the EEOC, Sutton’s effects showed up more and more every year after 2001. When the ADA Amendments Act of 2008 went into effect in January of 2009, the narrow ADA definition of disability was alleviated and is expected to make the number of cases with a merit resolution revert toward the mean in the future iterations of the EEOC ADA Title I database.

There are similar observations for broad application of parties who have dual identities for race and ethnicity. As noted earlier, the fact that the EEOC did not have a classification for charging parties that would

identify as Hispanic ethnicity and African American or White race, can be problematic when filling out federal forms for filing allegations. This could lead to skewed results for those in Hispanic, African American, and White category due to charging parties who chose to select one category or the other based on their choice of what to be identified as.

As Table 2 displays, there is a relatively consistent number of missing race data across groups with the overall percent missing being 7.7%, and within the race groups the percent missing ranged from 7.0% to 9.2%, a very narrow range. The missing data could be from an error in the collection process on the side of the EEOC staff members who entered the data into the database or it could be the result of charging parties potentially being unwilling to reveal their race due to fear of government repercussions (e.g. a person of Hispanic origin afraid that he or she will be deported even though he or she has already become a citizen). Of course, those groups with smaller counts (e.g., Asians) could be more greatly affected by even the average or standard amount of missing race data in the EEOC database.

Our research highlights the significant challenges for racial and ethnic minorities encountering employment discrimination. These findings have direct implications for policies, practices, and program development. Apparently, racial and ethnic minorities are prone to underreporting ADA Title I allegations. Human resource departments must issue policies tailored to explicitly describe EEOC discrimination allegation procedures in laymen terms upon hire instead of a brief, insufficient overview at orientation. New hires should know exactly where to report and EEOC officials should be in a visible location and this information should be updated on an interval basis. Policies should be extremely clear about the requirement to keep allegations anonymous to ameliorate the fear of those most vulnerable of job loss to encourage reporting of discriminatory actions. Additionally, it has been elucidated that language barriers may limit access to information, which can also negatively influence reporting of allegations. EEOC regulations must be available in other languages and/or interpreters to provide clarification related to language deficits. Beyond the aforementioned implications, increase education continues to be needed to distinguish ADA Title I discrimination from other types of discrimination to target filing allegations under most accurate legislation.

These results should be interpreted in light of various limitations. The limitations are as follows: (1)

There may be multiple cases filed by the same individual thus all cases may not be independent; there was no way of identifying if there were multiple cases from one single individual. (2) Secondary data could potentially have errors from the collection process such as from the EEOC staff members who filled out the paperwork to be entered into the database when the charging party came in to file a complaint *or* from the charging party who might have felt too afraid of government repercussions to reveal his or her race (e.g. Hispanics who fear somehow being deported even though they have obtained citizenship). This could have contributed to all or some of the missing data and potentially skew results even if these missing cases have been removed. (3) Sample size was small in early years, and especially in later years (likely because not all cases had been closed) and sample size for Hispanics and Asians is much smaller relative to Whites and Hispanics, again especially in the later years. There may be unknown bias as to why there are fewer than expected cases for these race/ethnicity groups. (4) There are certain variables specifically related to race and ethnicity, such as acculturation, income, etc., that could potentially act as confounders. However, because the EEOC database did not collect these variables, they could not be controlled for in the analyses. (5) Potentially, there is missing data because all categories that were labeled null for each variable were deleted prior to analyses. Additionally, if people chose to opt out of providing their race to EEOC, then we would have less race-related null data or missing data. (6) Also, with regards to missing or inaccurate data, the fact that the EEOC database relies on self-report data is a substantial limitation. EEOC staff members must take charging parties at their word as far as how they classify themselves or if they choose not to do so. When a charging party comes in to make a claim, things like disability type are taken at face value from the charging party's interview. They might have several disabilities but only report one since they would have to choose at the point in order to file the claim.

The present study provides direction for future research. Some research should include comparison and contrast of each race/ethnic group in a study between specific disability types (e.g., back impairment, cerebral palsy, multiple sclerosis, muscular dystrophy, depression, schizophrenia, alcoholism, drug abuse, etc.). Additionally, studies that explore whether race and/or ethnicity would predict merit or non-merit outcome of ADA Title I allegations would potentially reveal interesting findings. Although it has been mentioned that

the EEOC did not identify individuals that have multiple claims, research that could examine differences among racial and ethnic groups who file multiple allegations may lead to further evidence related to merit and non-merit closure outcomes for those groups. Since the ADA have experienced dramatic changes due to the ADA amendment of 2008, cross-sectional panel outcome data among racial and ethnic groups that begins with time periods after 2008 are needed. Qualitative and mixed methodology should also be considered to explore the unreported side of disability employment discrimination and, more specifically, how it is affected by race/ethnicity.

## 5. Conclusions

In conclusion, this study responds to future recommendations cited in Lewis et al. [38] that call for follow-up of the influence of race on the merit outcome of ADA Title I employment discrimination allegations and investigating the same with more than one racial or ethnic group. This study substantially contributes to emerging research that explores distinct differences in ways employment discrimination is experienced by minority subgroups of the disability population. Given the paucity of previous literature, this study will further elucidate the importance of publishing empirical evidence about the difference and trends over time of ADA Title I employment discrimination allegations, particularly as it relates to merit closure in a heterogeneous sample that clearly represents a diverse population in the United States.

## Acknowledgments

This work was supported by the National Institute of Disability and Rehabilitation Research and the United States Department of Education (grant H133A080060).

## References

- [1] Rehabilitation research and training center on disability demographics and statistics. [Disability Statistics Report]. Ithaca: Cornell University; 2008.
- [2] Risher P, Amorosi S. The 1998 NOD/Harris Survey of Americans with Disabilities. Washington, DC: Louis Harris and Associates Author; 1998.
- [3] Partch-Davies T, Rivera J. *Everyday Heros: How Taxpayers with Significant Disabilities are Building Assets. Building a Better Economic Future.* 2008; 45.
- [4] Hillborg H, Svensson T, Danermark B. Expectations, visions and sense of empowerment: in the face of a vocational rehabilitation process for people with psychiatric disabilities. *Scandinavian Journal of Disability Research.* 2010; 12(2): 109-124.
- [5] Burge P, Ouellette-Kuntz H, Lysaght R. Public views on employment of people with intellectual disabilities. *Journal of Vocational Rehabilitation.* 2007; 26 (1): 29-37.
- [6] Smits S. Disability and employment in the USA: the quest for best practices. *Disability & Society.* 2004; 19 (6): 647-662.
- [7] Kreider B, Pepper JV. Disability and employment. *Journal of the American Statistical Association.* 2007; 102 (478): 432-441.
- [8] Anđelic N, Stevens LF, Sigurdardottir S, Arango-Lasprilla JC, Roe C. Associations between disability and employment 1 year after traumatic brain injury in a working age population. *Brain Injury.* 2012; 26(3): 261-269.
- [9] Ficke RC. Digest of data on persons with disabilities. [Statistical Data Report]. Washington, DC: National Institution on Disability Rehabilitation Research (ED/OSERS). 1992.
- [10] Alston RJ, Bell TJ. Cultural mistrust and the rehabilitation enigma for African Americans. *J Rehabil.* 1996; 62(2): 11.
- [11] Acemoglu D, Angrist JD. Consequences of employment protection? The case of the Americans with Disabilities Act. *J Polit Econ.* 2001; 109(2): 1.
- [12] Turner J, Bourdreax M, Lynch V. A preliminary evaluation of health insurance coverage in the 2008 American Community Survey. [Report]. US Census Bureau; 2009.
- [13] Kemp Jr EJ. Disability in our society. In: Weaver CL, editor. *Disability and work: Incentives, rights and opportunities.* Washington, DC: AEI Press; 1991. p. 55.
- [14] LaPlante MP. State estimates of disability in America: Disability statistics report 3. [Statistical Data Report]. Washington, DC: National Institution on Disability Rehabilitation Research (ED/OSERS). 1993.
- [15] Erickson W, Lee C, von Schrader S. Disability statistics from the 2008 American Community Survey (ACS) and Current Population Survey (CPS). Ithaca, NY: Cornell University Rehabilitation Research and Training Center on Disability Demographics and Statistics (StatsRRTC); 2010. Retrieved from [www.disabilitystatistics.org](http://www.disabilitystatistics.org).
- [16] Unger DD, Campbell LR, McMahon BT. Workplace discrimination and mental retardation: The nutritional EEOC ADA research project. *J Vocat Rehabil.* 2005; 23(3): 145.
- [17] Lowman DJ, West SL, McMahon BT. Workplace discrimination and Americans with cerebral palsy: The national EEOC ADA research project. *J Vocat Rehabil.* 2005; 23(3): 171.
- [18] Mitchell PR, McMahon BT, McKee D. Speech impairment and workplace discrimination: The national EEOC ADA research project. *J Vocat Rehabil.* 2005; 23(3): 163.
- [19] Lewis AN, McMahon BT, West SL, Armstrong AJ, Belongia L. Workplace discrimination and asthma: The national EEOC ADA research project. *J Vocat Rehabil.* 2005; 23(3): 189.
- [20] Bowe FG, McMahon BT, Chang T, Louvie, I. Workplace discrimination, deafness and hearing impairment: The National EEOC ADA Research Project. *Work.* 2005; 25(1): 19.
- [21] West SL, McMahon BT, Monasterio E, Belongia L, Kramer K. Workplace discrimination and missing limbs: The National EEOC ADA Research Project. *Work.* 2005; 25(1): 27.
- [22] Conyers L, Boomer KB, McMahon BT. Workplace discrimination and HIV/AIDS: The national EEOC ADA research project. *Work.* 2005; 25(1): 37.
- [23] Armstrong AJ, McMahon BT, West SL, Lewis AN. Workplace discrimination and cumulative trauma disorders: The

- National EEOC ADA Research Project. *Work*. 2005; 25(1): 49.
- [24] McMahon BT, Edwards R, Rumrill P, Hursh N. An overview of the National EEOC ADA Research Project, Phase One. *Work*. 2005; 25(1): 1.
- [25] McKenna M, Fabian E, Hurley JE, McMahon BT, West SL. Workplace discrimination and cancer: The National EEOC ADA Research Project. *Work*. 2007; 31(8): 8.
- [26] Neath J, Roessler R, McMahon B, Rumrill P. Patterns in perceived employment discrimination for adults with multiple sclerosis. *Work*. 2007; 29(3): 255.
- [27] McMahon BT, West SL, Shaw LR, Waid-Ebbs K, Belongia L. Workplace discrimination and traumatic brain injury: The National EEOC ADA Research Project. *Work*. 2005; 25(1): 67.
- [28] West MD, Dye AN, McMahon BT. Epilepsy and workplace discrimination: Population characteristics and trends. *Epilepsy Behav*. 2006; 9(1): 101.
- [29] Roessler RT, Neath J, McMahon BT, Rumrill PD. Workplace discrimination outcomes and their predictive factors for adults with multiple sclerosis. *Rehabil Couns Bull*. 2007; 50(3): 139.
- [30] Tartaglia A, McMahon BT, West SL, Belongia L, Beach LS. Workplace discrimination and healthcare: The national EEOC ADA research project. *J Vocat Rehabil*. 2007; 27(3): 163.
- [31] McMahon BT, Hurley JE. Discrimination in hiring under the Americans with Disabilities Act: An overview of the national EEOC ADA research project. *J Occup Rehabil*. 2008; 18(2): 103.
- [32] McMahon BT, Roessler R, Rumrill Jr PD, Hurley JE, West SL, Chan F, Carlson L. Hiring discrimination against people with disabilities under the ADA: Characteristics of charging parties. *J Occup Rehabil*. 2008; 18(2): 122.
- [33] West SL. Reasonable accommodation and employment discrimination: An introduction to the special issue. *Rehabil Profess*. 2008; 16(4): 187.
- [34] West SL, Roessler R, Rumrill PD, McMahon BT, Hurley JE, Carlson L, Chan F. Employer characteristics and reasonable accommodation discrimination against people with disabilities under the ADA. *Rehabil Profess*. 2008; 16(4): 209.
- [35] Van Wieren T, Reid C, McMahon BT. Workplace discrimination and autism related disorders: The National EEOC ADA Research Project. *Work*. 2009; 31(3): 299.
- [36] Roessler RT, Hurley JE, McMahon BT. A comparison of allegations and resolutions involving issues of discharge versus constructive discharge. *Adv Dev Hum Resour*. 2010; 12(4): 407.
- [37] Hurley JE. Merit determinants of ADA Title I allegations involving discharge: Implications for human resources management and development. *Adv Dev Hum Resour*. 2010; 12(4): 466.
- [38] Lewis AN, Hurley JE, Armstrong AJ, Koch LC, Gary KW, McMahon BT. The influence of race on allegations of employment discrimination due to disability. *J Min Disabil Res Prac*. 2010; 1(3): 30.
- [39] Hurley JE, Lewis AN, Koch LC, Armstrong AJ, Gary KW, McMahon BT. An examination of the relationship between the race of ADA Title I claimants and attributes of their employers. *J Min Disabil Res Prac*. 2010; 1(3): 119.
- [40] Rim KH. Model, victim, or problem minority? Examining the socially constructed identities of Asian-Origin ethnic groups in California's media. *Asian American Policy Review*. 2007; 16: 37.
- [41] Xie Y, Goyette K. Social mobility and the educational choices of Asian Americans. *Social Science Research*. 2003; 32(3): 467-498.
- [42] langHirschman C, Massey DS. Places and peoples: The new American mosaic. In D.S. Massey *New faces in new places: The changing geography of American immigration*. 2008: 1-22. NY: Russell Sage Foundation.
- [43] Office of Management and Budget [Webpage on the Internet]. Washington, DC: Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, Federal Register Notice; 1997 [updated 1997 October 30; cited 2011 November 30]. Available from: [http://www.whitehouse.gov/omb/fedreg\\_1997standards](http://www.whitehouse.gov/omb/fedreg_1997standards).
- [44] Moss K, Burris S, Ullman M, Johnsen S, Swanson J. Unfunded mandate: An empirical study of the implementation of the Americans with Disabilities Act by the Equal Employment Opportunities Commission. *University of Kansas Law Review*. 2001; 50(1): 1.
- [45] McMahon BT, Hurley JE. Discrimination in hiring under the Americans with Disabilities Act: An overview of the National EEOC ADA Research Project. *J Occupat Rehabil*. 2008; 18(2): 103.
- [46] McMahon BT, West SL, Hurley JE. Who is a person with a disability under the ADA? Mitigating circumstances, the U.S. Supreme Court and the case of diabetes. *J Vocat Rehabil*. 2006; 24(3): 177.

Copyright of Work is the property of IOS Press and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.