

# Where African-American Women Work and the Nonfatal Work-Related Injuries They Experienced in the U.S. in 1996, Compared to Women of Other Races

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**KEY WORDS:** occupational injury; African-American; women; NEISS; employment; occupational health and safety; work environment

## BACKGROUND

Occupational safety and health problems of women in general, and African-American women in particular, have historically not been adequately addressed. In fact, concern on racial disparity, and difficulties in obtaining scientific data for the studies of minority public health led to the disadvantaged Minority Health Improvement Act of 1990 (Public Law 101-527). This study was conducted to identify where African-American women work and the nonfatal injuries they experienced on the job in the United States in 1996, and to compare these patterns to women of other races.

## METHODS

Occupational nonfatal injury data for 1996 were obtained from the National Electronic Injury Surveillance System (NEISS), a national probability sample of hospital emergency departments (EDs) in the United States. Employment data were derived from the Current Population Survey (CPS), monthly public use micro data files. Injury rates were presented as the number of injuries per 100 full-time equivalent workers (FTEs), which were derived from actual hours worked.

## RESULTS

Table I indicates that in 1996, a higher proportion of African-American women worked in service occupations when compared to whites and women of other races (25.4% compared to 16.4% and 17.4%, respectively), and a higher proportion worked in the medical services and hospital industries (19.2% compared to 14.5% and 12.2%, respectively). African-American women were more likely to report family incomes of less than \$20,000 (30.2% compared to 15.2% and 16.7%, respectively), and be single or without a spouse present (65.4% compared to 42.2% for all other women). It is estimated that about 141,479 African-American women aged 16 years or older were treated for an occupational injury in a hospital ED in the U.S. in 1996, resulting in an injury rate of 2.4/100 FTEs (95% CI = 1.4-3.3). The injury incident rate ratio of African-American women to white women was 1.4, although not statistically significant (Table II). African-American women had higher injury rates than white women in all age groups. The body parts most frequently injured among African-American women were the trunk, back, and groin (26%), while the most frequently injured body parts among all other women were hands and fingers (28%). Sprains and strains accounted for 40% of all injuries to African-American women, compared to 33% and 32% for whites and all other races, respectively (Table III).

## CONCLUSIONS AND RECOMMENDATIONS

African-American women had higher rates of nonfatal occupational injuries presented to a hospital ED for medical treatment, than white women, in all age groups. Differences

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**TABLE I.** Industry, Occupation, and Demographic Patterns for Employed Women in the United States by Racial Group (CPS<sup>a</sup>, 1996)

	African-American women		White women		Women of other races	
	Numbers	%	Numbers	%	Numbers	%
Total	6,706,869	100	46,078,713	100	2,379,353	100
<b>Industrial groups</b>						
Retail trade	996,634	14.9	8,988,087	19.5	494,633	20.8
Educational service	695,709	10.4	5,107,468	11.1	174,278	7.3
Medical service, exc. Hospital	684,985	10.2	3,812,034	8.3	180,756	7.6
Hospital	600,173	9.0	2,843,243	6.2	176,437	7.4
Public administration	520,587	7.8	1,817,658	3.9	113,582	4.8
Finance, insurance, and real estate	476,152	7.1	3,848,906	8.4	175,453	7.4
All other industries	2,732,629	40.7	19,661,317	42.7	1,064,214	44.7
<b>Occupational groups</b>						
*Service	1,703,701	25.4	7,544,472	16.4	414,457	17.4
Administrative support	1,663,167	24.8	11,633,111	25.3	489,174	20.6
Professional speciality	849,573	12.7	7,857,913	17.1	401,942	16.9
Sales	718,596	10.7	6,193,451	13.4	321,251	13.5
Executive, administrative, and managerial	654,787	9.8	6,464,050	14.0	296,498	12.5
All other occupations	1,117,044	16.7	6,385,717	13.9	456,032	19.2
<b>Family incomes</b>						
\$20 k and over/yearly	3,810,988	56.8	34,512,275	74.9	1,714,401	72.1
less than \$20 k/yearly	2,024,465	30.2	7,017,178	15.2	398,148	16.7
Unknown	871,416	13.0	4,549,261	9.9	266,804	11.2
<b>Presence of spouse</b>						
No	4,388,575	65.4	19,454,058	42.2	1,004,719	42.2
Yes	2,318,294	34.6	26,624,656	57.8	1,374,634	57.8

\*Service occupations include private household, protective, and other service.

<sup>a</sup>Current Populations Survey (CPS), Jan.-Dec., 1996. US Department of Labor (Bureau of Labor Statistics), Washington, DC.

**TABLE II.** Occupational Injury Morbidity Among African-American Women by Age Group Compared to Women of Other Races, U.S. 1996

Age groups	White women			African-American women			Women of other Races			Rate ratios**	
	Cases	Rate*	95% CI	Cases	Rate	95% CI	Cases	Rate	95% CI	AA	WO
All ages	694,494	1.7	1.3–2.1	141,479	2.4	1.4–3.3	54,000	2.3	1.2–3.7	1.4	1.4
16–17	16,652	3.3	2.1–4.6	2,440	4.2	1.9–6.4	***			1.3	
18–19	36,044	3.5	2.2–4.8	5,283	4.1	2.0–6.1	3,015	4.6	2.4–12.5	1.2	1.3
20–24	105,362	2.8	1.9–3.7	17,846	3.0	1.7–4.3	6,780	2.6	1.1–5.1	1.1	0.9
25–34	194,142	1.9	1.4–2.4	45,934	2.6	1.5–3.8	17,390	2.6	1.1–4.2	1.4	1.4
35–44	177,957	1.5	1.2–1.9	38,557	2.0	1.2–2.8	16,280	2.4	1.1–3.8	1.3	1.6
45–54	108,908	1.2	0.9–1.5	22,249	1.9	1.0–2.8	6,551	1.4	0.7–2.0	1.6	1.2
55–64	47,048	1.3	0.9–1.6	8,416	1.9	1.1–2.7	2,549	1.7	0.9–2.5	1.5	1.3
65–74	6,889	1.0	0.6–1.4	***			***				
75+	1,491	1.2	0.5–1.9	***			***				

\*Rate, number of cases/100 FTEs.

\*\*Rate ratio, AA: African-American women; WO: women of other races, using white women as a reference.

\*\*\*Numbers were not reported due to unstable estimates (less than 1,200).

**TABLE III.** Occupational Injury Morbidity Among African-American Women by Body Part and Diagnosis Compared to Women of Other Races, U.S. 1996

Body part/Diagnoses	White women		African-American women		Women of other races		Rate ratio**	
	Cases	Rate*	Cases	Rate	Case	Rate	AA	WO
<b>Body Part</b>								
Foot/toe	34,455	0.8	7,314	1.2	2,284	1.0	1.5	1.2
Hand/finger	190,319	4.7	29,903	5.0	15,514	7.0	1.1	1.5
Head/face/neck	86,931	2.1	18,622	3.1	5,756	2.6	1.5	1.2
Internal/multiple	21,138	0.5	2,801	0.5	2,273	1.0	0.9	2.0
Leg/knee/ankle	98,530	2.4	21,337	3.6	7,912	3.6	1.5	1.5
Should/arm/wrist	119,837	2.9	24,137	4.1	6,914	3.1	1.4	1.1
Trunk/groin	140,611	3.4	36,875	6.2	13,262	6.0	1.8	1.7
Unknown	2,673	0.1						
<b>Diagnoses</b>								
Sprain/strain	230,841	5.7	57,018	9.6	17,045	7.7	1.7	1.4
Contusion/abrasion/hematoma	161,776	4.0	34,991	5.9	10,955	4.9	1.5	1.2
Laceration	103,808	2.5	15,961	2.7	6,835	3.1	1.1	1.2
Puncture/avulsion	35,876	0.9	5,535	0.9	3,587	1.6	1.1	1.8
Dislocation/fracture	37,495	0.9	5,257	0.9	2,150	1.0	1.0	1.1

\*Rate, number of cases/100 FTEs.

\*\*Rate ratio, AA: African-American women; WO: women of other races, using white women as a reference.

in employment status by racial group may suggest potential explanations for the higher risk among African-American women. For example, the higher proportion of African-American women working in the health care sector (where patient lifting and moving are often required) may be associated with the high risk of sprains and strains. More information on occupation, industry, and workplace exposure of the injured worker should be collected and examined to study these associations. Differences in demographic characteristics by racial group should also be considered in future design of research involving occupational injuries among African-American women. Based on the fact that the

medical service and hospital industries covered one-fifth of all employed African-American women in the U.S., we suggest that the services industries in general, and the health care sector in particular, should be a priority for research and prevention of nonfatal occupational injuries among African-American women.

## REFERENCE

Public Law 101-527 [H.R. 5702]: November 6, 1990. United States Code, Congressional and Administrative News 101<sup>st</sup> Congress Second Session 1990. Vol. 2-104 Stat. 2311-2335.