

Background

Common pain treatments are not readily obtained by 19% of Americans who do not have health insurance and 14% who are underinsured (IOM, 2011). Moderate evidence exists that post-treatment exercises can reduce back pain recurrences (Choi, 2011).

Research Objectives

Examine racial/ethnic disparities in use of physical therapy among elderly adults with chronic back pain

Study Design

We used data from the 2000-2012 Medical Expenditure Panel Survey.

Means comparison, multivariate logistic regression, and Blinder-Oaxaca decomposition techniques were used to estimate the likelihood of receiving any physical therapy during the past 12 months by race/ethnicity (Whites, Blacks, and Latinos).

Population Studied

Elderly adults (≥ 65 years), with diagnosis of back pain (ICD9=724), who self-reported having pain for more than 12 months.

Our sample included 3,375 Non-Hispanic Whites (Whites), 426 Non-Hispanic Blacks (Blacks), and 439 Latinos.

Sample Summary Statistics by Race/Ethnicity

	Whites	Blacks	Latinos
	n= 3,375	n= 439	n= 426
	mean	mean	mean
Any physical therapy	0.20	0.10***	0.13**
Age 65-74	0.52	0.66***	0.65***
Age 75-up	0.48	0.34***	0.35***
Female	0.60	0.63	0.66**
Married	0.54	0.30***	0.47**
Interviewed in English	1.00	1.00	0.47***
Schooling <12 years	0.57	0.72***	0.86***
Schooling 12-16 years	0.33	0.23***	0.13***
Schooling >16 years	0.10	0.06***	0.01***
Family income under 100% FPL	0.12	0.29***	0.30***
Family income under 100%-200% FPL	0.22	0.33***	0.34***
Family income >200% FPL	0.66	0.38***	0.36***
Having usual source of care	0.96	0.96	0.95
Private health insurance	0.62	0.38***	0.22***
urban	0.74	0.81***	0.92***
Northeast	0.19	0.23	0.16
Midwest	0.28	0.19***	0.03***
South	0.31	0.50***	0.45***
West	0.21	0.09***	0.36***
Self reported health			
Poor/fair	0.28	0.48***	0.50***
good	0.32	0.30	0.33
Very good/excellent	0.40	0.22***	0.17***
Self reported mental health			
Poor/fair	0.09	0.18***	0.19***
good	0.32	0.40***	0.40***
Very good/excellent	0.59	0.42***	0.41***
yr2012	0.08	0.11*	0.10
yr2011	0.07	0.09	0.08
yr2010	0.07	0.08	0.08
yr2009	0.07	0.10*	0.08
yr2008	0.06	0.09*	0.05
yr2007	0.08	0.09	0.07
yr2006	0.10	0.11	0.09
yr2005	0.08	0.09	0.09
yr2004	0.08	0.05*	0.12**
yr2003	0.07	0.06	0.07
yr2002	0.10	0.06*	0.08
yr2001	0.07	0.04*	0.05*

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Whites were the reference groups.

Principal Findings

- White seniors with chronic back pain (20%) were more likely to receive physical therapy than Blacks (10%) or Hispanics (13%).
- After taking into account socioeconomic and other access factors, Blacks with chronic back pain remained less likely to receive physical therapy than Whites (OR=0.49, $p < .001$).
- Seniors with chronic back pain who reported very good/excellent mental health ($p < .01$), were women ($p = .02$), and/or had at least 12 years of education ($p < .01$) were more likely to receive physical therapy than other seniors.

Multivariate logistic regressions: probability of having physical therapy

	Model 1		Model 2	
	OR	p	OR	p
White	reference		reference	
Latino	0.63	0.02	1.16	0.59
Black	0.40	<0.001	0.49	<0.001
Female			1.31	0.02
Schooling 12-16 years			1.69	0.00
Schooling >16 years			2.20	0.00
Self reported health				
Very good/excellent			1.36	0.05
Self reported mental health				
Very good/excellent			1.91	0.00

Note: Model 2: individuals' demographic and socioeconomic characteristics were all controlled. We only list the variables with statistically significant coefficients.

- Decomposition results showed that sociodemographic factors are associated with 50% of disparities among Whites vs. African Americans.

- Poverty (lower family income) was the major reason associated with racial disparities in receiving physical therapy.
- Our model over explained the disparities between Whites vs. Latinos (140%).
- Fewer years of education was the main reason associated with disparities among Whites vs. Latinos.

Conclusions

These findings directly address gaps in the literature identified by the Institute of Medicine's report "Relieving Pain in America," and add disparities in referrals to physical therapy to the existing literature regarding persistent disparities in pain treatment.

Implications for Policy, Delivery or Practice

Although medically necessary outpatient physical therapy is covered under Medicare Part B (\$1,940 for physical therapy in 2015), our findings suggest that socioeconomic factors drive racial disparities in receipt of physical therapy for chronic back pain, providing further evidence to support the National Pain Strategy.

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