Racial and Ethnic Minority Health Disparities in TBI & SCI

Lillian Flores Stevens, Ph.D.
Advanced Rehabilitation Research Training Fellow
Department of Physical Medicine and Rehabilitation
Virginia Commonwealth University
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Overview

- Provide context for the significance of the topic
- Summarize literature regarding racial / ethnic minority disparities in TBI and SCI rehabilitation outcomes
- Provide recommendations for future research
By 2050, racial and ethnic minorities will make up 54% of the US population (30% Hispanics, 15% African Americans, and 9% Asians) — US Census Bureau

Health disparities exist among racial and ethnic minorities in terms of various health conditions (Smedley, Stith & Nelson, 2003), health care quality and access (US DHHS, 2010), and disability (US DHHS, 2006; CDCP, 2008)
Background and Significance

- Individuals with disabilities suffer health disparities (US DHHS, 2006)

- Members of a racial/ethnic minority group who also have a disability are at increased risk
Background and Significance

- TBI and SCI are extremely relevant, given current conflicts
- Can have long-lasting effects on survivor, family, and community
Background and Significance

- TBI = a form of acquired brain injury that occurs when a sudden trauma causes damage to the brain

- Annual average TBI-related death rates (per 100,000 population) for 1997-2007 CDCP, 2011
  - American Indian /Alaska Natives (27.3)
  - Blacks (19.3)
  - Hispanics (14.4)
Background and Significance

- SCI = a disturbance of the spinal cord that results in loss of sensation and mobility

- Each year, an estimated 12,000 individuals sustain a SCI

  - Significant increase in SCI among African Americans and Hispanics
Rehabilitation Outcomes


- Used MEDLINE/PubMed, PsycINFO, CINAHL, InfoTrac One File, and Health Source: Nursing/Academic Edition

- 39 research articles were found for TBI; 49 were found for SCI
TBI: Treatment Outcomes

- 9 articles
- Majority found that African Americans and Hispanics were less likely to:
  - Receive the highest quality of emergency room care
  - Be discharged to rehabilitation centers for further treatment
  - Receive additional and more intensive rehabilitative therapies
  - Be discharged for further rehabilitation or specialized care after inpatient treatment
- Race/ethnicity did not influence receipt of rehabilitation services for one major, urban, level 1 trauma center
TBI: Functional Outcomes

- 8 articles

- Majority found that minorities experienced:
  - Worse disability levels
  - Less functional independence

- Differences were notable up to 5 years post-TBI
TBI: Employment/Productivity Outcomes

- 8 articles

- Majority found that minorities experienced:
  - Less job stability
  - Less receipt of vocational support services
  - Less successful employment

- Differences were notable up to 5 years post-TBI
TBI: Community Integration Outcomes

- 6 articles

- All found that African Americans and Hispanics experienced:
  - Worse productive integration
  - Worse social integration

- Differences were notable up to 1 years post-TBI
TBI: Marital Outcomes

- 2 articles

- Conflicting results:
  - Minorities with greater disability had more marital stability
  - Minorities with greater disability had higher divorce rates
TBI: Quality of Life / Life Satisfaction Outcomes

- 4 articles

- Half noted that African Americans had lower quality of life or life satisfaction than Whites
TBI: Neuropsychological Outcomes

- 2 articles

- African Americans score lower on measures of general cognitive ability

- More traditional African American cultural values/beliefs associated with lower test performance
TBI: Emotional / Behavioral Outcomes

- 4 articles

- African Americans generally experience
  - Increased depression
  - Poorer social functioning
  - Increased posttraumatic stress

- Hispanics develop post-concussional disorder less frequently than Whites and African Americans
TBI: Caregiver Outcomes

- 5 articles

- African American caregivers report:
  - Fewer needs met
  - Spending more time caregiving

- Mixed findings regarding impact of race/ethnicity on distress and burden

- African American and Hispanic caregivers:
  - Use more emotion-focused coping
  - Tend to opt for support from houses of worship rather than professional support
SCI: Hospital-Related Outcomes

- 9 articles

- Minority patients:
  - Are more likely to sustain injury through use of firearms
  - Have shorter lengths of stay in rehabilitation

- Mixed findings regarding re-hospitalization rates

- No differences between minorities and Whites regarding perceived quality of care
SCi: Emotional / Mental Health-Related Outcomes

- 6 articles

- Latinos, African Americans and American Indians experienced:
  - Higher depression
  - Poorer adjustment

- African Americans were more likely to report abstinence from drinking
SCI: Physical Health-Related Outcomes

- 12 articles
- Among the American Indian population, older age at onset, more injuries, and less social support were associated with more days in poor physical health
- Pain prevalence was higher among Whites, but non-Whites reported higher intensity of pain
- American Indians and African Americans were at greater risk for UTIs and pressure ulcers
- Whites were significantly more at risk for kidney stones and bladder calculi
SCI: Employment Outcomes

- 9 articles

- All found that minorities experienced:
  - Poorer employment rates
  - Lower rates of return-to-pre-injury-work
  - Lower wages
SCI: Functional Outcomes

- 6 articles

- Minorities with SCI:
  - Had better scores related to functional independence at admission to inpatient rehabilitation
  - Were less likely to show improvement in FIM scores at discharge
  - Were less likely to achieve greater community integration
  - Reported greater levels of handicap in the area of mobility
  - Were less likely to have appropriate customizable wheelchairs or back-up wheelchairs
SCI: Quality of Life Outcomes

- 6 articles

- Minorities with SCI:
  - Have lower subjective well being in the areas of career, employment, finances, living arrangement, and adjustment, which persist up to 6 years
  - Have more environmental barriers resulting in decreased life satisfaction after SCI
SCI: Family-Related Outcomes

- 4 articles

- 3 of the 4 studies showed higher divorce rate among African Americans

- Mixed findings regarding racial/ethnic differences in marital stability over time
Bottom Line

Racial and ethnic minority patients with TBI and SCI tend to have worse rehabilitation outcomes.
Suggestions for Future Research

- Investigate possible racial and ethnic group differences with whom little or no research has been done (e.g., Asian Americans, American Indians)

- Corroborate findings regarding differences for those outcomes that have been examined by only a few studies (e.g., marital status, quality of life, etc)
Suggestions for Future Research

- Study long-term rehabilitation outcomes among racial and ethnic minority groups

- Determine differences in outcomes with a specific emphasis on within-group differences (e.g., White vs. Black Hispanics; US-born vs. recent immigrants; country or regional differences)

- Perform qualitative and mixed method analyses
Suggestions for Future Research

- Determine the effect that patient cultural and attitudinal factors have on service utilization, recovery, and rehabilitation outcomes among racial and ethnic minority patients

  - Acculturation
  - Cultural Mistrust
  - Family Structure
  - Fatalistic Attitudes
  - Gender Roles
  - Immigration Status
  - Language Proficiency
  - Perceived Racism
  - Religiosity/Spirituality
  - Stigma, Attitudes, & Cultural Beliefs
Suggestions for Future Research

- Identify the most effective interventions for specific racial and ethnic minority populations

- Evaluate the effectiveness of culturally-tailored interventions designed to improve rehabilitation outcomes in minority groups.


National Spinal Cord Injury Statistical Center (NSCISC), Spinal cord injury facts and figures at a glance, Birmingham, AL, University of Alabama. Retrieved from [https://www.nscisc.uab.edu/](https://www.nscisc.uab.edu/)
References


