Race/Ethnicity and Nativity Differentials in new Measures of Disability and Functioning for Older Adults

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Abstract

Research points to differentials in disability by race/ethnicity, nativity and gender. However, disability and declines in health start long before individuals are limited in their ability to perform expected social roles. This study moves beyond traditional measures of disability to examine performance based capacity measures, enhanced measures of ADL/IADL type disability, and participation in valued activities for Medicare beneficiaries aged 65 and over using data from the National Health and Aging Trends Study (NHATS). I further examine demographic and socioeconomic factors to explore possible explanations for these differences by sub-group. I expect to find race/ethnicity, nativity differentials in ADL/IADL measures that can be performed using technology or assistive devices, as well as differences in the ability to participate in enjoyed activities. The differences I report will have important implications for health services and health policy geared toward a rapidly diversifying aging population.

Extended Abstract

As the population continues to age and older individuals constitute a larger and more racially diverse group, the importance of understanding differences in health outcomes by race/ethnicity and nativity becomes crucial for our society. Declines in mortality under conditions of low fertility point to a growing percentage of elderly persons in the population. According to projections, life expectancy will continue to increase (Arias, 2010) and the older population will be increasingly varied in race/ethnicity and nativity. Thus, adults aged 65 and older will compose a more diverse population than any cohort preceding them in both race and nativity – with a fairly large number of minority and foreign-born elderly individuals within this age distribution.

Mortality and ADL/IADL disability research consistently indicates substantial differences in mortality and more recently disability by race/ethnicity and nativity among

the older U.S. population (Hummer and Chinn, 2011; Elo et al., 2011; Hayward & Heron, 1999). For example, although the Hispanic Paradox is well documented in mortality, recent research reveals that this "Paradox" does not extend to disability patterns (Hayward et al., forthcoming). In fact, older Hispanics (both U.S.-born and foreign-born) experience significantly higher levels of functional limitations and disability than whites (Haas et al., 2012; Markides et al., 2007). Among the Asian population, documented mortality rates are low relative to non-Hispanic whites (Hummer et al., 2004: Hayward & Heron, 1999), however, recent research has found that the proportion of foreign-born Asians experiencing disability after age 65 is remarkably high (Markides et al., 2007; Mutchler et al., 2007). And finally, recent research on black Americans has found that black women experience the highest levels of functional limitations and between ages 50-70, but not in late life. Other studies report a black-white "crossover in disability" that occurs after age 80, (Johnson, 2000) yet other studies do not find evidence of this crossover (Kelly-Moore & Ferraro, 2004). And in respect to nativity, recent research has found that black immigrant groups experience better health in comparison to blacks born in the U.S. (Elo et al., 2011). In sum, mortality and disability patterns for U.S. sub-groups vary by race and nativity status, with disadvantaged U.S. born groups experiencing higher mortality than immigrants do.

Because traditional measures of ADL and IADL disability have not changed over the past four decades, they are unlikely to disentangle changes in how self-care and household activities are accomplished (Freedman et al., 2011). This distinction is important since access to modern technology and assistive devices allows individuals to accomplish tasks they would otherwise need assistance with or be unable to perform. And

because ADL and IADL are generally self-measures in national surveys, it is likely that those individuals who are successfully using technology and assistive devices are less likely to report a disability.

Despite the increase in research on ADL/IADL disability by race/ethnicity and nativity, less is also known about how these groups differ in their use of technology and assistive devices and how tasks are being carried out differently depending on socioeconomic resources, environment, and access to technological innovations (many of which are marketed to the elderly). Very little research has focused on how groups differ by race/ethnicity and nativity in their adoption of accommodations or behavioral changes. This is a crucial element of study since traditional measures focus mainly on those with very low functioning, and those individuals who have limitations but are higher functioning are left out of studies altogether.

To that end, I first aim to document differences in functioning for diverse race/ethnic groups, further stratifying by nativity and gender. I use data from the National Health and Aging Trends Study (NHATS), a longitudinal data set that samples Medicare beneficiaries aged 65 and older. Using the NHATS, several domains of disability can be measured to document more nuanced limitations across race/ethnic groups for both foreign-born and U.S.-born individuals in later life. Importantly, variations in physical capacity limitations illustrate specific patterns that ultimately lead to differentials in disability and mortality by race/ethnicity, nativity, and gender.

The disablement model presented by Nagi (1976) has proven to be a powerful framework of disablement as a process rather than simply the inability to perform socially expected roles (ADL/IADL disability). Nagi's framework denotes a pathway in

which disablement starts with a pathology or impairment in the body. This impairment in turn leads to task oriented limitations and depending on many factors, becomes a disability once a person cannot perform socially expected roles in their environment (Verbrugge & Jette, 1993). Thus, measuring earlier points in the disablement process can help us document task oriented (rather than relational) limitations across diverse groups and better understand how this process occurs differently across mid and late life for disadvantaged minority groups as well as the foreign-born population. In addition, the International Classification of Functioning, Disability, and Health (ICF) framework used by the World Health Organization has developed more current language that provides a broader classification scheme covering three main domains: functioning, activities and participation, and environment.

The NHATS framework blends Nagi's model of the disablement process with the more current language of the World Health Organization's International Classification of Functioning, Health, and Disability (Freedman et al., 2011). With NHATS data I am able to analyze several domains that together encompass disability. These include, the capacity to perform activities, "how" activities are actually done, and the types of accommodations that are being made by individuals to successfully complete activities they would otherwise not be able to perform. In addition, the NHATS includes items that measure whether individuals are able to participate in activities they value and enjoy. Going beyond the basics of self-care and measuring quality of life is crucial for a better measure of healthy life. My second goal is to document how participation restrictions differ by race/ethnicity and nativity, and further stratify by gender. I expect to find differences in participation restrictions depending on resources and environment, with

disadvantaged U.S.-born groups and foreign-born groups experiencing less opportunity to engage in valued activities.

Using the NHATS I will first assess prevalence rates for activity performance (traditionally ADLs) self-performance measures by race/ethnic and nativity as well as the ways in which individuals who are not able to perform the activity on their own accommodate with equipment or modify their behavior. Secondly, I will assess the prevalence rates of physical capacity limitations by race/ethnicity and nativity using 12 items that measure both challenging and less challenging tasks without equipment. Lastly, I will estimate logistic regression models to assess how these measures (ADL, IADL, Physical Capacity) differ by race/ethnicity and nativity net of region of residence and socioeconomic factors (education, wealth, income) with whites as the reference group. All individuals who self-identify as Hispanic, regardless of race, will be classified as Hispanic. The other race/ethnic groups I will include are Asian Americans, non-Hispanic blacks, and non-Hispanic whites. Respondents will be further subdivided by nativity. Men and women will be modeled separately since disability and functioning vary by gender.

I expect to find stronger race/ethnic and nativity differentials for the ADL/IADL measures than the performance based measures since the former can be performed using assistive devices and technology. In addition, I also expect to find that whites are more likely to perform self-care and household activities with the help of computers, and other assistive devices and technology that require more financial resources. Controlling for socioeconomic factors is expected to reduce race/ethnic and nativity differences in functional limitation prevalence for minority race/ethnic/nativity groups relative to non-

Hispanic whites. (Hayward et al., 2000). Ultimately, I feel that these findings can inform health policy for our rapidly aging and increasingly diverse society as well as better understand what component of health we are measuring with ADL/IADL disability items.

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