

The Relationship between Pain, Disability, and Sex in African Americans



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■ ABSTRACT:

Older African Americans consistently report diminished capacities to perform activities of daily living (ADL) compared with other racial groups. The extent to which bodily pain is related to declining abilities to perform ADL/ADL disability in African Americans remains unclear, as does whether this relationship exists to the same degree in African American men and women. For nurses to provide optimal care for older African Americans, a better understanding of the relationship between bodily pain and ADL disability and how it may differ by sex is needed. The aim of this study was to examine whether pain, age, education, income, marital status and/or comorbid conditions were associated with ADL disabilities in older African American women and men. This was a cross-sectional descriptive study. The sample included 598 participants (446 women, 152 men) from the first wave of the Baltimore Study on Black Aging. African American women (odds ratio [OR] = 4.06; 95% confidence interval [CI] 2.63-6.26) and African American men (OR = 6.44; 95% CI = 2.84-14.57) who reported bodily pain had greater ADL disability than those who did not report bodily pain. Having two or more comorbid conditions also was significantly associated with ADL disability in African American women (OR = 3.95; 95% CI: 2.09-7.47). Further work is needed to understand pain differences between older African American women and men to develop interventions that can be tailored to meet the individual pain needs of both groups.

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INTRODUCTION

Older African Americans experience a disproportionate rate of activities of daily living (ADL) disability in comparison with non-Hispanic Whites (Fuller-Thomson, Yu, Nuru-Jeter, Guralnik, & Minkler, 2009; Thorpe Jr, Szanton, Bell, & Whitfield, 2013; Whitson et al., 2011). ADL disability is defined as difficulty in accomplishing activities of daily living such as eating, drinking, bathing, and so on (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963). ADL disability is significantly related to higher mortality rates, poorer health outcomes, and more cognitive decline in African Americans. (Ayotte, Allaire, & Whitfield, 2013; Furner, Giloth, Arguelles, Miles, & Goldberg, 2004; World Health Organization, 2015). It is essential to identify factors that are related to ADL disability in older African Americans because addressing these factors may provide essential knowledge needed to decrease the disparities in ADL disability experienced by older African Americans (Thorpe Jr et al., 2011, 2013).

It is well documented that pain can contribute to ADL disability in older adults (Andrews, Cenzer, Yelin, & Covinsky, 2013; Eggermont et al., 2014). Pain is related to ADL disabilities in African Americans (Baker & Whitfield, 2006); however, it is unknown whether this relationship differs in men versus women. To date there is scant literature on pain outcomes within African American women and men and how they are related to ADL disability. It is important to know whether a relationship between pain and ADL disability exists within older African American women and men and whether a difference exists between the sexes to determine whether interventions targeting pain should be tailored by sex (Wilson, 2006).

Previous studies have examined the association between pain and ADL disability by comparing African American men and/or women to other racial/ethnic groups (Green, Baker, Sato, Washington, & Smith, 2003; Wildgaard et al., 2011). Researchers have reported that a significant relationship exists between pain and disability within African Americans and non-Hispanic White samples (Cano, Mayo, & Ventimiglia, 2006; Green, Hart-Johnson, & Loeffler, 2011; Kutner, Zhang, Allman, & Bowling, 2014; Leveille, Bean, Ngo, McMullen, & Guralnik, 2007; Rejeski, Miller, Foy, Messier, & Rapp, 2001). Researchers also have reported that African Americans experienced more disability-related pain than other racial and ethnic groups (Ndao-Brumblay & Green, 2005; Ruehlman, Karoly, & Newton, 2005), and African American women experience more pain-related disability

than non-Hispanic White women in particular (Ndao-Brumblay & Green, 2005). Within African American samples, researchers have reported that more pain was significantly related to poorer physical functioning (Baker & Green, 2005; Baker & Whitfield, 2006; Walker, Harrison, Brown, Thorpe, & Szanton, 2016).

Differences in biology and societal expectations exist between African American men and women that may influence their trajectory to disability. For example, biological (e.g., hormonal) changes after menopause often predispose women to developing various types of arthritis, which may initiate the disablement process in women (Neogi & Zhang, 2013). Using accommodations such as special shoes may be a threat to expectations of women's femininity within society, and lack of use of these accommodations may influence disability outcomes (Harrison, Stuifbergen, Walker, Scott, & Choban, 2011). Men may have societal expectations to show strength and independence, and this may affect their decision to report pain or address their pain, which may be related to their disability outcomes (Evans, Frank, Oliffe, & Gregory, 2011). Further knowledge of ADL disability outcomes in the two groups may assist nurses and healthcare entities in improving healthcare and rehabilitation for the respective sexes (Griffith, Ellis, & Allen, 2013; Harrison et al., 2011). When examining differences among African American men and women, researchers can begin to tease out how pain may influence ADL disability in older African American men and women.

The aim of this study was to examine whether pain, age, education, income, marital status, and/or comorbidities were associated with ADL disabilities in older African American women and men. The theoretical framework used for this study was the disablement process model developed by Verbrugge and Jette (1994). Various factors may influence any part of the disablement process (Verbrugge & Jette, 1994). Pain can be considered a biological factor that can influence disablement outcomes (Harrison, 2009). In the current study, the authors sought to understand whether the biological factor of pain was associated with ADL disability in older African American women and men.

The current study is unique in that the authors examined outcomes in a specific racial/ethnic group and did not compare across race/ethnicities. By examining intragroup variability, researchers studying health disparities can provide further knowledge regarding specific factors that may adversely affect this group (Whitfield, Allaire, Belue, & Edwards, 2008). A better understanding of bodily pain and its effects on ADL disability is important for nurses to have to provide

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