

# Characterizing Mobility Limitations Among Older African American Men

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**Abstract:** This study represents an effort to contribute to the limited body of research on biopsychosocial contextual factors that influence or contribute to mobility limitations for older African American men. Specifically, we were interested in examining associations between socio-demographic, physical and emotional health experiences with mobility limitations. A secondary analysis of 1666 older African American men was performed to investigate socio-demographic, mental and physical health correlates to a specific measure of mobility limitation. In the final model, difficulty with self-care, severe pain interference, and problems with usual activities were most strongly associated with mobility limitations. Men who were married were significantly less likely to experience mobility limitations. Findings highlighted the relationship between mobility limitations and difficulty performing activities of daily living. Additional research should examine the impact of poor emotional health and the buffering effects of marriage on mobility for older African American men, a population at high risk of experiencing disparate health outcomes.

**Keywords:** Mobility ■ African American Men ■ Mental health

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## INTRODUCTION AND BACKGROUND

A certain degree of functional decline is expected during older adulthood, and preserving mobility is recognized as essential to active healthy aging and maintaining a high quality of life.<sup>1,2</sup> Broadly, functional decline in the context of aging has been defined as any health problem that prevents a person from completing a range of tasks; including activities of daily living (ADL) (i.e. feeding, bathing, walking across a room) and instrumental activities of daily living (IADL) (i.e. shopping, housework, and preparing meals).<sup>3,4</sup> Extant literature broadly defines mobility as one's ability to move independently around their environment,<sup>3,5,6</sup> which is essential to both ADLs and IADLs.<sup>3</sup> Other literature has found that a decline in mobility often

precedes the onset of a disability, social isolation, a loss of independence, poorer health status,<sup>1</sup> poorer quality of life,<sup>5</sup> and death<sup>2,3</sup> for many older adults. Seminal authors have generally pointed towards the onset and severity of mobility decline as being patterned along socioeconomic and racial gradients in the United States.<sup>1,2</sup> For example, African American older adults experience functional limitations as particularly debilitating; they have higher rates of inactivity<sup>7,8</sup> and similar literature document that a higher prevalence of diabetes and obesity for this populations contributes to disparities in functional decline.<sup>2,9</sup>

Older African American men often face added challenges to maintaining mobility. Studies have identified a limited number of factors associated with a loss of mobility and or increased functional limitations over time among older African American men including: lower levels of education,<sup>2</sup> frailty,<sup>10</sup> residing in poor-quality neighborhoods,<sup>11</sup> anxiety, depression, and sarcopenia-related disability.<sup>12</sup> The knowledge base specifically focused on older African American men and functional decline remains relatively limited, but more broadly, extant scholarship points to mental health as a potentially understudied influence on functional health among older adults. For example, Bishop and colleagues<sup>13</sup> highlight how depression and anxiety affect an individual's perception of musculoskeletal pain, which may lead to functional limitations. Other studies report that depressive symptoms alone predict the onset of functional limitations related to ADLs and mobility as people advance from middle age to later life, and the relationship between depression and disability is often greatest amongst men.<sup>14</sup> Despite an established link between depressive symptoms to functional decline,<sup>15</sup> and older African American men being most likely to be classified as frail compared to men of other racial/ethnic groups,<sup>10</sup> older African Americans do not report experiencing significantly higher overall incidence of depressive symptomatology.<sup>16</sup>

This study represents an effort to contribute to the limited body of research on biopsychosocial contextual factors that influence or contribute to mobility limitations for older African American men. Specifically, we were interested in examining associations between socio-demographic, physical and emotional health experiences with mobility limitations.

## METHODS

Between 2006 and 2010, the Centers for Medicare and Medicaid Services (CMS) funded an intervention study to promote cancer screening among minority elders recruited by a large hospital system in Detroit, Michigan. Specifically, this longitudinal study recruited 5783 African American adults aged 60 and older from more than 25 senior living facilities, 100 older adult day centers, approximately 50 churches or religious organizations for African American elders, and health clinics affiliated with the larger health system in order to test a randomized patient navigation intervention targeting Medicare enrollees. Each participant in this study was randomized into one of two study arms: either receiving patient navigation services or standard cancer screening recommendations without additional services. Nurses served as research coordinators, collecting a baseline and exit assessment by phone for each participant that documented cancer screening behaviors, health and cancer-specific knowledge and beliefs, and socio-demographic characteristics. The current study represents a secondary analysis of de-identified baseline assessments for all African American male participants in this parent study prior to the intervention (N = 1666). The authors of this secondary study were not involved in the design or administration of the parent study.

## MEASURES

**Mobility limitation** was assessed by asking respondents to indicate which statement best describes their health state today. The options were: “I have no difficulty walking about one fourth mile or climbing 10 steps”, “I have some difficulty walking about one fourth mile or climbing 10 steps” or, “I am unable to walk about one fourth mile or climb 10 steps.” This measure was further dichotomized so that responses of “some difficulty or unable” were coded as (1) and no difficulty was coded as (0). This measure was modified from the well-validated Medical Outcome Study (MOS) 36-Item Short Form Health Survey (SF-36) versions 1.0 and 2.0.<sup>17</sup> This item has also been assessed for relevance, reliability, and validity specifically with African American older adults. With regard to reliability, studies report a Cronbach’s alpha of 0.77 and good convergent and discriminant validity when tested with community-dwelling African American adults.<sup>18,19</sup>

**Socio-demographic variables** were assessed by self-report. Income was measured by respondents’ reported household income in U.S. dollars in the 12 months prior to the interview and was divided into nine ascending categories: Less than \$5000; \$5000–\$9999; \$10,000–\$19,999; \$20,000–\$29,999; \$30,000–\$39,999; \$40,000–\$49,999; \$50,000–\$79,999; \$80,000–\$99,999;

and \$100,000 or more; before being dichotomized into less (1) and more (0) than \$20,000. Education was dichotomized such that participants having a high school diploma or less were in one category, and those having some college or higher education were in the second category. Respondents’ partner status was dichotomized such that those “married” or “living with partner” were in the partnered category, and those “widowed”, “divorced”, “separated” and “never married” were in the un-partnered category. Age was measured using a single continuous item and later dichotomized during the analysis into participants over and under age 75.

**Emotional or mental health variables** were collected in order to determine the psychological and social context of mobility limitations among these participants. These variables included anxiety or depression, downheartedness, and accomplishing less than one would like due to emotional problems. Anxiety or depression was measured using a single item asking participants to indicate the statement that was most true for them. Responses included items that stated, “I am not anxious or depressed”, “I am moderately anxious or depressed”, and “I am extremely anxious or depressed”. Response categories for most and all of the time were combined into a single category (coded as 1) and all other responses were combined (coded as 0). In an effort to identify emotional health alternatives to depression, we utilized an item that asked, “During the past four weeks, how much of the time have you felt downhearted and blue?” Responses included “all of the time,” “most of the time,” “some of the time,” “a little of the time,” and “none of the time”. This item was further dichotomized for the analysis so that “all of the time” and “most of the time” were combined (coded as 1) and all other responses were combined (coded as 0). Finally, to better understand how emotional health problems might interfere with physical functioning, participants were asked, “During the past 4 weeks, how much of the time have you accomplished less than you would like with your work or other regular daily activities as a result of any emotional problems? Responses were indexed on a five-point scale from “none of the time” to “all of the time”. The responses for “most of the time” and “all of the time” were combined to form a binary variable (coded as 1) in contrast to all other responses (coded as 0).

**Physical health** was assessed by asking respondents to indicate their level of agreement with statements about difficulty with pain, usual activities, and trouble with the types of activities they can perform due to physical health issues. Measures to characterize physical health were modified from the pain, general health, and role limitations due to physical health subscales of the SF-36. Limitations to usual activities was characterized by asking participants to

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