

Physical Frailty in Urban African-Americans

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BACKGROUND / RATIONALE:

The original five-year study investigated African Americans living in a five-square mile section of a poor inner-city area of St. Louis, Missouri who were aged 70 to 99 years at baseline (1992-94). That project had the long range goal of identifying strategies for improving the active life expectancy of older urban-dwelling African Americans, and demonstrated excess disability and risk for functional decline among this population compared not only to Anglo Americans but also to national samples of African Americans matched on age and gender. Low socioeconomic status across the life course was proposed as a possible explanation. The original project also identified specific problems (e.g., obesity, high nutritional risk, diabetes mellitus, dehydration, and renal insufficiency) that contribute significantly to this increased disability. The current study retains this long-term goal by investigating the causes and consequences of the demonstrated excess disability.

OBJECTIVE (S):

Aim 1. Evaluate the effect of decreased physical activities, increased dependency in instrumental activities of daily living, and fear of falling on subjects' health experiences over time using additional follow-up of the original cohort. Aim 2. Examine the timing, precursors, and consequences of decreased muscle strength and size (sarcopenia) in the new cohort. Aim 3. Investigate the timing, precursors, and consequences of "subclinical disability" (defined as a change in frequency or method of activities of daily living performance) using cross-sectional and longitudinal studies.

METHODS:

There are two basic components of the study. The first involves additional follow-up of the original, older cohort via three 30-minute telephone interviews at months 1, 12, and 24, and brief 5-minute telephone interviews at months 2-11, and 13-23. The second component of this study is designed to provide a better understanding of the early stages of the disablement process on which to base intelligent interventional strategies. This component involved the recruitment, evaluation, and follow-up of a new cohort of younger African Americans. The new cohort greatly enhances our ability to examine the critical pathways to disability in our target population. It includes 998 African Americans aged 49 to 65 years old at baseline evaluation and stratified by neighborhood to permit

greater exploration of socioeconomic conditions on the disablement process. About half of these subjects were recruited from the same inner-city area as the original cohort, and the other half were recruited from less impoverished nearby suburbs. Subjects in this cohort received a detailed, 2.5 hours in-home evaluation at baseline (2000-2001) that included traditional self-report social survey questions, epidemiological physical performance tests, and other basic assessments including measured height, weight, blood pressure, and peak respiratory flow. At months 12 and 24, these subjects also received brief 15-minute telephone interviews.

FINDINGS / RESULTS:

Data from both studies on two different cohorts suggest that inner-city minorities have particularly high levels of excess disability and risk for further decline, compared not only to NHWs but also to national samples of African Americans. Some of these health risks include high prevalence of clinically relevant levels of depressive symptoms, fear of falling, increased lower extremity functional limitations, decreased walking frequency, and greater difficulty performing the activities of daily living. Correlates of these adverse outcomes include obesity, diabetes, renal disease, and dehydration. Recently, we have begun to identify crucial transition points where interventions are likely to be helpful. These findings are explicated in greater detail in the publications listed below. Put simply, our results confirm the central importance of lower body functional limitations and demonstrate the importance of "subclinical disability" in identifying those individuals who are likely to develop new lower body functional limitations.

STATUS:

Project is ongoing.

IMPACT:

The purpose of this project is to identify specific points in the disablement process at which interventions can be tailored to halt and/or reverse negative functional status trajectories among middle-aged African Americans.

JOURNAL ARTICLES:

1. Miller DK, Malmstrom TK, Joshi S, Andresen EM, Morley JE, Wolinsky FD. Clinically relevant levels of depressive symptoms in community-dwelling middle-aged African Americans. *Journal of The American Geriatrics Society* 2004; 52: 741-748.
2. Wolinsky FD, Miller DK, Andresen EM, Malmstrom TK, Miller JP. Health-related quality of life in middle-aged African Americans. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 2004; 59: S118-S123.