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Prevalence and Predictors of Fatigue Among Middle-Aged and Older Adults: Evidence from the Health and Retirement Study

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To the Editor

Fatigue is associated with adverse health outcomes such as mortality, morbidity, and disability among middle aged and older adults.¹ It is also an important component of the clinical manifestation of the frailty syndrome.² The most recent evidence regarding fatigue prevalence among the U.S. adult population date back to the 1970s and early 1990s.^{3–4} For example, a U.S. survey in 1974 showed that 14.3% men and 20.4% women reported suffering from “frequent fatigue.”³ and another study found that 12% of men and 22% of women were considered to have “lack of energy.”⁴ However, the current prevalence of fatigue in the U.S. older adult population is unclear. Therefore we described the prevalence of fatigue in a nationally representative sample of the U.S. middle aged and older adults in 2004.

METHODS

This study used data from the 2004 wave of the Health and Retirement Study (HRS), a biennial longitudinal survey of a U.S. nationally representative sample of community-dwelling adults aged 51 and above.⁵ The present study included 17,084 individuals who completed the interview themselves and have complete data on fatigue symptoms. Fatigue is defined as positive response to at least one of two questions: “...during the past week, you felt that everything you did was an effort, or you could not get going?” We plotted the smoothed (locally weighted least squares, or LOWESS) prevalence of fatigue by age to show the unadjusted cross-sectional relationship between age and fatigue prevalence for men and women.

RESULTS

The sample represented a population of 74 million U.S. adults aged 51 and above. The mean age of the sample was 64.6 years and 55.9% were female. White, Black, and Hispanics

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Author Contributions:

H. Meng: concept and design, acquisition of data, data analysis, preparation of manuscript

L. Hale: concept and design, preparation of manuscript

F. Friedberg: concept and design, interpretation of data, critical revision of manuscript

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accounted for 81.9%, 9.2%, and 6.5% of the sample, respectively. The prevalence of fatigue was estimated at 31.2% (95% confidence interval: 30.0–32.5%). Fatigue was more common in women (33.3%) than in men (28.6%, $p < 0.01$), and in minorities (47.5%) than in Whites (27.5%, $p < 0.01$).

Figure 1 illustrates the LOWESS smoothed fatigue prevalence by age for men and women. The relationship between age and fatigue prevalence appeared to be “J-shaped” among both men and women, with the lowest fatigue prevalence occurring among the 60–64 years old group for men and 65–69 years old group for women. The prevalence of fatigue appeared to reach its highest level among individuals aged 90+ years for both men and women.

DISCUSSION

The fatigue prevalence among both men and women were much higher than those reported in the literature from U.S. and European samples. For example, using the same fatigue definition, Vestergaard et al. reported prevalence rates of 15% and 29% among a sample of Italian men and women, respectively.⁶ In addition, using “lack of energy” as the definition of fatigue, Cheng et al. reported that 12% of men and 22% of women had fatigue.⁴ “Lack of energy” in that study was operationalized by a positive response to “sits around a lot for lack of energy” and having two of six symptoms. Therefore, the higher prevalence of fatigue in this U.S. population might be due to a combination of factors, including: differences in populations investigated, a more general measure of fatigue used in the present study, as well as differences in fatigue prevalence over time.

We find that fatigue prevalence was higher among minorities, which is consistent with the higher levels of unexplained chronic fatigue and chronic fatigue syndrome found in minorities in a community-based epidemiological study of UCF and CFS.⁷ Future research should investigate possible physiological, psychological and social reasons why these differences exist, and how clinical and psycho-social interventions can be designed to address this racial/ethnicity fatigue gap.

The present study is limited by the cross-sectional study design and descriptive nature. Future studies are needed to investigate the risk factors of fatigue over time. In addition, the fatigue questions may not fully capture the complexity of fatigue symptom (i.e. the severity, impact, duration, and variations over time). However, the subjective nature of fatigue symptom, face validity of the questions, and evidence linking these questions to physical performances suggest that it is a useful brief screening measure for community-living older adults. To our knowledge, the present study is the first large-scale analysis of the symptom of fatigue in the middle aged and older adult population in the U.S. More work is needed to understand the implications of the disparities in fatigue across different racial/ethnic groups, as fatigue may be a pathway through which racial and ethnic health disparities manifest.

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References

1. Avlund K, Pedersen AN, Schroll M. Functional decline from age 80 to 85: Influence of preceding changes in tiredness in daily activities. *Psychosom Med.* 2003; 65:771–777. [PubMed: 14508019]
2. Walston J, Hadley EC, Ferrucci L, et al. Research agenda for frailty in older adults: Toward a better understanding of physiology and etiology: Summary from the American Geriatrics Society/National Institute on Aging Research Conference on Frailty in Older Adults. *J Am Geriatr Soc.* 2006; 54:991–1001. [PubMed: 16776798]

3. Chen MK. The epidemiology of self-perceived fatigue among adults. *Prev Med.* 1986; 15:74–81. [PubMed: 3714661]
4. Cheng H, Gurland BJ, Maurer MS. Self-reported lack of energy (anergia) among elders in a multiethnic community. *J Gerontol A Biol Sci Med Sci.* 2008; 63:707–714. [PubMed: 18693225]
5. Institute for Social Research. The Health and Retirement Study (HRS); [Accessed March 17, 2010]. 2010 Available at: <http://hrsonline.isr.umich.edu/intro>
6. Vestergaard S, Nayfield SG, Patel KV, et al. Fatigue in a representative population of older persons and its association with functional impairment, functional limitation, and disability. *J Gerontol A Biol Sci Med Sci.* 2009; 64A:76–82. [PubMed: 19176328]
7. Jason LA, Richman JA, Rademaker AW, et al. A Community-Based Study of Chronic Fatigue Syndrome. *Arch Intern Med.* 1999; 159:2129–2137. [PubMed: 10527290]

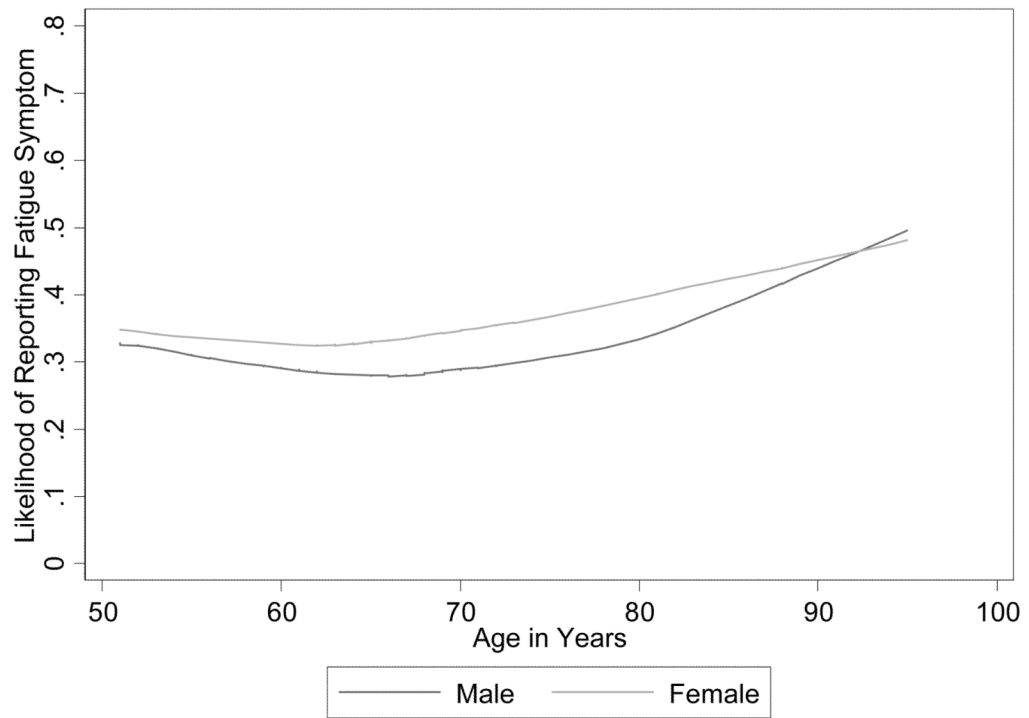


Figure 1.
 Fatigue Prevalence by Gender and Age
 Note: LOWESS (locally weighted least squares) smoothed fatigue prevalence
 Male: n=6989; Female: n=10095