

VETERAN STATUS AND TRANSITIONS IN FUNCTIONAL
CONDITIONS IN OLDER AMERICANS

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Veterans' quality of life has received increasing public attention and U.S. government focus. One unique aspect of military service is the veterans' exposure to health hazards encountered in intense and sometimes life-threatening military environments. These military experiences may contribute to higher prevalence and incidence of physical and mental illnesses, in turn leading to elevated disability and mortality compared to non-veteran groups. If health conditions that develop as a consequence of military service become chronic, their full impact on disability and mortality might not manifest except in older age groups. In many studies on veterans' health and mortality, those who have previously served at any time in the military have often been found to have considerably better functional ability and lower death rate than in the general population. This is mainly because service members are screened prior to entry and have better access to preventive health services and medical care during and after military service than most civilians, described as the "healthy veteran effect." Consequently, a direct comparison of health and mortality between veterans and non-veterans could be biased, and adverse influences of military service on the quality of life may be overlooked unless appropriate comparison groups of non-veterans are used.

In theory, such potentially confounding effects of differences in the population health composition will gradually diminish as the cohort ages. The dynamic process of human survival tends to select out relatively frail persons from among the comparatively disadvantaged group; therefore, the health of the survivors in the two groups becomes more similar with increasing age. If changes in the population health composition and access to medical care are strong enough to offset the healthy veteran effect, the potentially adverse impact of military experience on health, disability and mortality is

observed. Consequently, veterans may be subject to worse health, elevated disability, and excess mortality at older ages, as compared to their non-veteran counterparts. Understanding whether or not such phenomena exist may add considerably to our knowledge of the relative importance of veteran status on the quality of life and the key pathways that tie military experience to health and survivorship at older ages. However, there is a dearth of longitudinal studies that explore the effect of military service on health status, disability and mortality among older Americans, let alone research investigating the structure and mechanisms involved in this relationship.

The present research examines the relationship between veteran status and functional condition transitions among older Americans age 70 years or older during a 2-3-year interval from 1993/94 to the end of 1995. Data used for this study come from the Survey of Asset and Health Dynamics Among the Oldest Old (AHEAD). The study attempts to decompose the effect of veteran status (veterans versus non-veterans) into the direct effect and the indirect effects by means of physical health conditions and mental disorders on transitions from two origin states, “not disabled” and “disabled,” to three destination states, “not disabled,” “disabled,” and “dead.” We use a newly developed structural multinomial logit approach to estimate this model.

We found that among those functionally independent at baseline, older veterans at age 70 are less likely to stay functionally healthy at Wave II survey (conditional probability effect = -0.0104) and more likely to develop functional disability (0.0054), as compared to non-veterans. At older ages, this pattern is gradually altered, and at age 85, veterans are more likely to stay functionally independent (0.0030) and less likely to become disabled (-0.0465) in the observation period. At the same time, functionally

independent veterans have a slightly higher death rate at age 70 than their non-veteran counterparts (0.0050), and such excess mortality among veterans increases steadily over age (at age 85, the excess mortality is 0.0435). Among older Americans functionally disabled at baseline, veterans at age 70 are more likely to recover from disability within the observation period than non-veterans (0.0088), but at older ages, they are less likely to do so. At age 85, older veterans are considerably less likely to resume their functional independence (-0.0663). Functionally dependent veterans are slightly less likely to die at age 70 than non-veterans the same age (-0.0165), but at age 75, veterans' death rate becomes slightly higher than non-veterans' (0.0047). At age 85, the excess mortality among functionally disabled veterans is considerable (0.0904), more than doubled than among the functionally independent (0.0435). Some of the direct and indirect effects of veteran status perform in opposite directions, and such effects vary enormously in magnitude and direction over age. Generally, an older person's physical health, as compared to his or her mental disorders, plays a more important role in transmitting the effect of veteran status on functional status transitions and mortality in older Americans, especially among the Young-Old. However, much of the mechanisms inherent in the relationship of veteran status with transitions in functional status and in the excess mortality among older veterans are not captured by variations in their health status, among the Oldest-Old (those age 85 and older) in particular. The two health dimensions also derive some intervening effects jointly on differences in functional condition transitions and mortality between older veterans and non-veterans; however, such indirect effects appear to be fairly minor.