

The Effect of Military Service and Genotype on Older Age Outcomes: Evidence from the Vietnam Era Draft Lottery

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This study will use the 1970-1972 Vietnam War draft lotteries to investigate the impact of an exogenous shock to occupation on health and socioeconomic outcomes later in life. Because nonrandom selection into military service due to socioeconomic background or health status could bias results, we follow Hearst et al. (Hearst, Newman, & Hulley, 1986) and Angrist (1990), and use respondent date of birth files for cohorts born between 1950 and 1952 as an instrumental variable to code for draft eligibility. After assigning each birth date a draft number, draft numbers (as well as a formulation that uses an indicator variable for eligibility status) will be used as an instrumental variable predicting veteran status. This instrumented endogenous variable, veteran status, will then be regressed against a number of older age outcomes in four waves (2004-2010) of Health and Retirement Study (HRS), such as physical and mental health status, smoking behavior, longest held occupation and educational attainment. Additionally, instrumented veteran status will be interacted with genotype information in the HRS to test for genetic moderation (i.e. heterogeneous treatment effects) of veteran status on aforementioned outcomes.

This study will lead to a better understanding of how specific environments and genetic factors interact to mutually influence health and social outcomes. While prior research has looked at the impact of the draft on long-term employment and health (e.g. Angrist, Chen, & Frandsen, 2010), we are not aware of any study that has looked at potential genetic-environmental (GE) interactions. Heterogeneous response—by genotype—might help explain why the majority of studies have been unable to detect an overall average treatment effect. By using the draft lottery as an exogenous source of environmental variation in veteran status, we can identify empirically robust interaction effects between veteran status and specific genetic markers in looking at health and social outcomes at older ages (Conley, 2009). Exploiting natural variation in exposure to military service lends insight into how physiological pathways for some disease processes might be modified, constrained, or moderated by environmental influences.

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