

Veterans Status and Health Study

7/01/09 – 6/30/11

Western Washington University sociology professor Jay Teachman, along with Lucky Tedrow, director of WWU's Demographic Research Laboratory, has been awarded a \$74,785 grant from the National Science Foundation American Recovery and Reinvestment Act to study the impact of military service on health.

Using longitudinal data from the 1979 National Longitudinal Study of Youth (NLSY), the research outlined in this proposal will extend our previous research on the consequences of military service by examining the relationship between military service and both physical and mental health among men. Our research is both descriptive and analytical and is informed by multiple theoretical perspectives. The work being proposed will extend beyond the existing literature by explicitly considering how military service during the All Volunteer Force (AVF) era is linked to health up to age 40. We will pay particular attention to potential variations in the effects of military service as they occur according to race and characteristics of service. In addition, the research will make use of several 'natural experiments' made possible by the design of the NLSY to more accurately adjust for the nonrandom selection of individuals into military service. More specifically, this research seeks to:

1. Determine the relationship between military service and various measures of health (both physical and mental) with a focus on peacetime service. Numerous studies have linked military service during times of combat to negative health outcomes (Elder, Shanahan, and Clipp, 1997; O'Donnell, 2000; Villa, Harada, Washington, and Damron-Rodriguez, 2002; Vogt, King, King, Savarese, and Suvak, 2004). However, very little research has focused on the consequences of peacetime military service for health. Without understanding the peacetime consequences of military service for health it is difficult to place the effects of combat exposure on health into proper context.
2. Determine the link between the characteristics of military service and the various types of health outcomes. Military service is not a homogenous experience for all individuals who serve with substantial variation in duration of service, branch of service, type and duration of training received, military occupation performed, pay grade obtained, and type of discharge earned. Yet, there is no research that links these variations in military service to health outcomes. We will also link variation in experiences during military service to subsequent patterns of socioeconomic attainment (e.g., education, employment, income) that have in turn been tied to health outcomes (Cotton, 2002; Kahn and Fazio, 2005; Marmot, 2002).
3. Determine the impact of military service on health outcomes as it may vary according to race. Previous research has found differences between Whites and Blacks in the consequences of military service (Card, 1983; Lopreato and Poston, 1977; Martindale and Poston, 1979; Teachman and Call, 1996; Villemez and Kasarda, 1976). In many cases, Blacks have been found to experience an educational or economic premium following discharge from the military, factors that may positively influence subsequent health. Military service has also been found to spur marriage more among Blacks than

Whites, and marital status has also been linked to health outcomes (Johnson, Backlund, Sorlie, and Loveless, 2000; Lillard and Panis, 1996; Lund, Due, Modvig, Holstein, Damsgaard, and Andersen, 2002). Since the inception of the AVF, Blacks have entered the military in unprecedented numbers, and until recently the proportion of Blacks in the military has exceeded their proportion of the total population, making it even more important to consider racial differences in the experience of military service and its relationship to health.

4. Determine the mechanisms through which military service may affect health. That is, what are the proximate determinants of health (particularly physical health) that are linked to military service? Prior research has tied military service to the increased use of tobacco and alcohol, two behaviors that have substantial negative implications for health (Bray, Marsden, and Peterson, 1991; Klevens et al., 1995; Kroutil, Bray, and Marsden, 1994; McKinney, McIntire, Carmody, and Joseph, 1997). Other mechanisms known to affect health that will be considered include obesity and possessing health insurance (National Task Force on the Prevention and Treatment of Obesity, 2000; Baker, Shapiro, and Schur, 2000). Better information about the mechanisms linking military service to health outcomes will allow the development of policies designed to potentially alter the health trajectories of service members.
5. Estimate models of the effect of military service on health that control for nonrandom causal forces. One of the critical issues associated with the evaluation of treatment effects (here, military service) is the nonrandom selection of individuals into treatment groups (Heckman, 1992). This is particularly important for health outcomes, because all veterans are positively selected with respect to health. Heckman (1979) has proposed what has now become a standard adjustment for nonrandom selection. However, the Heckman procedure is heavily dependent on the adequacy of the model of selectivity specified (Stolzenberg and Relles, 1990). Recognizing this limitation, we offer as an extension of the Heckman procedure a set of fixed effects models made possible by using longitudinal data. We also offer an additional set of models that adjust for selectivity based on natural experiments that can be created using the NLSY dataset that allow us to compare the health of veterans to nonveterans with known (prior) health profiles.