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The Things They Carry:1 Combat, Disability and Unemployment among US Men*

Alair MacLean

Washington State University Vancouver, 14204 NE Salmon Creek Ave, Vancouver, WA 98686, alair@vancouver.wsu.edu, (360) 546-9177, Fax: (360) 546-9036

Abstract

Sociologists have long recognized that historical events, such as wars, depressions, and natural disasters, can affect the trajectories of people's lives and can reproduce or alter social structure. The following paper examines the effect of a type of event, war, on a facet of people's lives, their ability to work. It uses data from the Panel Study of Income Dynamics to test three accounts regarding how wars affect men's lives. The direct cumulative disadvantage account sees wars as negatively affecting the service-men who see combat regardless of their pre-combat characteristics. The moderated cumulative disadvantage account suggests that combat most negatively affects those who, before they fought, had lower status. The turning point account suggests the reverse: combat most negatively affects those who, before they fought, had greater status. The evidence suggests that, with regard to disability and unemployment, the effects of combat are most consistent with the direct cumulative disadvantage account.

For the last eight years, United States armed forces have been at war, first in Afghanistan and then in Iraq. More than 5,000 troops have been killed and another 36,000 troops have been wounded. Sociologists have long recognized that historical events, such as wars, depressions, and natural disasters, can affect the trajectories of people's lives and can alter or reproduce social structure (Collins 1989; Mills 1961). Along with other scholars, life course theorists have outlined these effects, suggesting that historical context combines with human agency and social relations to shape people's life course trajectories (Elder and Johnson 2002). Previous research has examined the impact of various events, including the Great Depression and the second World War (Elder 1974; Elder, Shanahan, and Clipp 1994). The following paper builds on this research by examining the effect of a type of event, war, on a facet of people's lives, their ability to work. It explores how wars affect the lives of some of those most closely involved, the soldiers who experience combat. It extends previous research by examining how wars affected the lives of men who came of age across a broad sweep of history, the last half of the twentieth century.

Previous research has arrived at contradictory conclusions regarding how military service affects veterans' socioeconomic attainment. These effects have been shown to vary with pre-service characteristics, and type and era of service (MacLean and Elder 2007). On the one hand, men benefit or at least do not suffer from military service if they enter the armed

¹This title is based on the title of Tim O'Brien's (O'Brien 1990) short story collection about the Vietnam War, *The Things They Carried*.

*Direct correspondence to Alair MacLean, Washington State University Vancouver, 14204 NE Salmon Creek Ave, Vancouver, WA 98686, alair@vancouver.wsu.edu..
Alair MacLean is an assistant professor of sociology at Washington State University Vancouver. Her research centers on the intersection of social inequality, military service, and the life course. She has published articles in *Annual Review of Sociology*, *Armed Forces & Society*, *Journal of Political and Military Sociology*, *Research in Social Stratification and Mobility*, and *Sociology of Education*.

forces with fewer advantages (Angrist 1990; Teachman and Tedrow 2004). Thus, military service may have reduced the gap between more and less privileged men. On the other hand, men also benefited from military service if they served as officers, who tend to have higher average educational attainment than enlisted service-members (MacLean 2008). Thus, military service may have increased the gap between more and less privileged men.

The contradictory implications of previous research could arise because people serve in different historical contexts. Indeed, veterans assess their service differently if they served in different eras (Segal, Lynch, and Blair 1979). One of the differences between different eras is whether a nation is at war or at peace, which affects whether service-members see combat. Combat could lead military service to have different effects in two possible ways. First, the different effects of service could stem from differences in the likelihood of combat exposure. Service-members may be more or less likely to be exposed to combat based on their pre-service characteristics. Second, the different effects of service could stem from the fact that combat affects people differently according to their pre-service status. Yet no previous research has examined whether the effects of combat on veterans' socioeconomic status are direct or are moderated by veterans' characteristics. This paper therefore addresses how combat may affect socioeconomic attainment by asking the following questions: Does combat lead to higher rates of disability and unemployment? Do these relationships differ across socioeconomic groups and historical eras?

The paper proceeds according to the following plan. First it develops three competing accounts regarding how wars affect veterans' lives. It then introduces the longitudinal data and growth curve models, which are uniquely suited to testing the hypotheses derived from the theoretical accounts. In the following section, it describes the results from these models of disability and unemployment. It concludes by suggesting broader implications of the findings as well as possible avenues for future research.

Combat as a scarring experience

For thousands of years, authors have written of the horrors of war (Homer 1961), which have both physical and psychological consequences. Over those millennia, soldiers have, to be sure, faced different conditions because of changes in technology. During the US Civil War, for example, they were more likely to die from diseases than in battle (Department of Defense 2003). Today, they have been less likely to die of illnesses and more likely to die or be wounded by accidents and hostile fire. They are more likely to survive with serious injuries today, which, in past wars, would have killed them (Gawande 2004). During all wars, however, they have faced the possibilities that they may be injured; that they may kill or be killed; and that their fellow soldiers may be injured or die. According to some researchers, Greek soldiers expressed the same feelings of grief and rage on the fields of Troy as did American soldiers in the jungles of Vietnam (Shay 1995), who, in turn, described their experiences using similar words as did soldiers who fought in the US Civil War (Dean 1997). On the battlefield, these soldiers faced extreme conditions and were exposed to danger and disease. They were intermittently bored, frightened, enraged, miserable, and lonely. They were also asked to violate social norms in order to carry out orders to fire on the enemy (Marshall 1978). For all of these reasons, combat veterans may be expected to have worse physical and mental health on average than people who have never faced combat.

Indeed, combat veterans appear to have worse outcomes on a variety of health measures than do non-combat veterans. Many combat veterans suffer from post-traumatic stress disorder (PTSD), which includes, among other symptoms, the flashbacks and jumpiness that survivors experience after a traumatic event. PTSD is a formal diagnosis that was developed

by psychiatrists in response to the Vietnam war (Yager, Laufer, and Gallops 1984). Yet doctors and psychiatrists have noted that soldiers suffer from the experience of war throughout history. During the Civil War, they described soldiers as afflicted with “irritable heart;” during World War I, they labeled them as suffering from “shell shock” (Dean 1997). In one of the oldest records of life after war, Odysseus exhibits behavior that has been compared to that of US Vietnam veterans (Shay 2002). Even if they do not have PTSD, combat veterans suffer worse physical and mental health than do people who did not see combat (Elder et al. 1994) and are more likely to die and to commit suicide (Fontana and Rosenheck 1995).

There are apparently, however, only four studies that evaluate whether combat also negatively affects veterans’ socioeconomic attainment. The findings of these studies are mixed. One study finds that combat did not affect Vietnam veterans’ years of schooling and occupational status (Vogt, King, King, Savarese, and Suvak 2004). However, two other studies find that combat veterans are more likely than non-combat veterans to have difficulty finding work, to have lost a job, and to be unemployed (Prigerson, Maciejewski, and Rosenheck 2002; Savoca and Rosenheck 2000). Combat veterans from the Vietnam era earned less (Savoca and Rosenheck 2000) and had lower educational attainment (Lyons, Kremen, Franz, Grant, Brenner, Boake, and Eisen 2006) than other veterans from that era who did not see combat. Only one of these studies examines combat veterans of different eras, but it does not evaluate whether the effects of combat differ by era (Prigerson et al. 2002). Nonetheless, these findings suggest that veterans experience wars as traumatic events that may lead to unemployment and to lower earnings.

If the negative effects on veterans’ lives persist and increase over time, the longitudinal effect of combat could contribute to cumulative disadvantage directly. Merton developed the theory of cumulative advantage, or what he labeled the “Matthew effect,” to describe positive effects; this concept has subsequently been extended to describe negative effects or cumulative disadvantage. Merton originally focused on the question of why some scientists get more credit than others for similar or collaborative work. He argued that this disproportionate credit was based on scientists’ reputations (Merton 1968). According to this theory, people tend to continue on the path on which they start. For the last four decades, scholars have extended this notion more broadly, arguing that some people have greater initial advantages that accumulate. Related research and theory has described events or experiences that have negative effects according to the same process, as contributing to cumulative disadvantage. People suffer in their later work lives, for example, if they lose their jobs earlier in the life course. On this basis, researchers have argued that early unemployment has a scarring effect (DiPrete 1981; Gangl 2006). They use this theory to explain why populations or groups become more unequal over time (DiPrete and Eirich 2006). According to the theory, people’s lives are affected by early advantages or disadvantages directly. Combat could be similar to unemployment in having a direct negative effect on those who experience it. This chain of reasoning suggests the following prediction:

Direct cumulative disadvantage hypothesis: Service-members exposed to combat are more likely to be disabled and unemployed than service-members who are not exposed to combat.

Effects of combat may differ

While the scarring account suggests that the effects of combat are randomly distributed across the people exposed to it, some people may be affected by combat differently if they come from different types of families or neighborhoods. The following section explores the possibility that the effects of combat are not randomly distributed in two ways. First,

veterans may experience combat as an experience that contributes to already existing disadvantages. They may be more negatively affected by combat if they came from poor or minority families. Second, they may be less negatively affected by combat if they come from such families. They may be more negatively affected by combat exposure if they come from wealthy or otherwise privileged backgrounds, experiencing combat as a negative turning point. Despite these possibilities, there has been little research examining whether combat affects different types of people differently.

Combat as an added disadvantage

Less privileged people may be more negatively affected by wars than more privileged people. Black and low-income veterans, for example, may have fewer resources to deal with the mental and physical injuries associated with wars (Nayback 2008). By contrast, more privileged people can draw on family resources to ensure that they are positively or at least less negatively affected. Indeed, one paper offers evidence that could be consistent with this view. Vietnam veterans were more likely to behave anti-socially and to experience stress as a result of combat if they had pre-service school and emotional problems (Gimbel and Booth 1994). People more commonly have such problems if they grew up in poor and minority families (Choi, Harachi, Gillmore, and Catalano 2005). Combat may therefore widen pre-existing inequality.

If the negative effects of combat are most noticeable among disadvantaged veterans, these effects would be similar to a process outlined by Blau and Duncan (1967) in which pre-existing differences both directly and indirectly affect later attainment. According to this view, people are affected by events or experiences that happen when they are adults differently based on the characteristics or experiences they had when they were children (DiPrete and Eirich 2006). Blacks, for example, had lower socioeconomic achievement and mobility than whites even after accounting for their lower average parental status and educational attainment (Blau and Duncan 1967). These less privileged people are more likely than more privileged people to have lower educational attainment (Sewell and Hauser 1975); lower average occupational status and earnings (Blau and Duncan 1967); and worse health (Willson, Shuey, and Elder 2007). Combat may therefore exacerbate existing health and socioeconomic disparities. This chain of reasoning leads to the following prediction:

Moderated cumulative disadvantage hypothesis: Among service-members who are exposed to combat, those who have fewer pre-combat advantages are more likely to be disabled and unemployed than those who have greater pre-combat advantages.

Combat as a negative turning point

Some previous research and theory suggests the reverse: potentially negative experiences, such as combat, may positively or at least less negatively affect poor and minority people. Indeed, veterans may benefit from combat, for example, if it increases their resilience or feelings of camaraderie (Aldwin, Levenson, and Spiro 1994; Elder and Clipp 1989). They may experience effects of combat that are consistent with the popular expression “That which does not kill me makes me stronger.” In this vein, some researchers have shown that poor teenagers are less negatively affected by being arrested than are wealthy teenagers. Less privileged delinquents may be protected by “disadvantage saturation” (Hannon 2003). According to this view, they are not as negatively affected by negative experiences because they have previously dealt with adversity. Indeed, some researchers have shown that young black men were more likely to be killed in Philadelphia than US troops were to be killed in Iraq (Buzzell and Preston 2007). More privileged people, therefore, may be less prepared for the potentially negative effects of combat because they have less previous experience dealing with trauma.

Previous researchers have not explicitly tested whether combat serves as a negative turning point, leading to greater suffering among more privileged veterans than among less privileged veterans. They have, however, evaluated whether military service in general provides a positive turning point, benefiting less privileged veterans more than more privileged veterans. If soldiers grew up in poor or minority families, they may benefit from the fact that when they enter the military they leave their families and friends behind (Brotz and Wilson 1946). Among those who entered the military during World War II, for example, delinquents were less likely to re-offend and earned more in their later civilian lives if they were sent overseas than if they were not (Sampson and Laub 1996). Some researchers have also shown that less educated and minority veterans earned more and worked at higher status jobs than comparable non-veterans when they re-entered the civilian labor market (Teachman and Tedrow 2004). While in the military, these disadvantaged men likely received formal and informal military training that helped them find better jobs than comparable civilians. After they left the military, they could also draw on government funds, such as the GI Bill, to help get more schooling than they would have otherwise (Bound and Turner 2002). They could, of course, benefit from such military training and educational funding whether or not they saw combat. Extrapolating from these findings, however, combat could affect people with fewer pre-combat resources less negatively than it affects people with more resources. This chain of reasoning leads to the following hypothesis:

Turning point hypothesis: Among service-members who are exposed to combat, those who have more pre-combat advantages are more likely to be disabled and unemployed than those who have fewer pre-combat advantages.

Selection

While the preceding discussion assumes that combat affects those who experience it, an association between combat and later outcomes could also stem from the pre-war characteristics of soldiers. The people who fight in wars may differ from those who do not in ways that lead them to experience different outcomes regardless of combat. Many previous researchers have tried to disentangle the effect of military service from that of selection (e.g., Angrist 1990). The armed forces have standards that determine which potential recruits are eligible to serve, rejecting recruits who have lower cognitive ability, physical fitness, and educational attainment. Military recruiters have historically shifted the ways that they apply these standards to respond to the changing needs of the military, the number and quality of potential recruits, and the state of the civilian economy (National Research Council 2006). They may, for example, relax the eligibility standards when the armed forces need more troops, as during wartime. When the forces need fewer troops, as during the peacetime Cold War, recruiters may apply the standards more stringently (Flynn 1993). Once in the military, service-members may be selected into particular positions and experiences on the basis of their different pre-service characteristics. The military may be more likely to send healthier troops to war zones, which has led researchers to be concerned about the “healthy warrior” effect (Armed Forces Health Surveillance Center 2007). Because of this effect, researchers are concerned that they cannot accurately assess whether returning troops suffer worse health after serving in combat. Previous research also suggests that soldiers may be more likely to fight in wartime if they have particular cognitive or family characteristics. The US troops who fought and died in Korea and Vietnam, for example, were more likely than those who did not to come from families and neighborhoods with fewer resources (Mayer and Hoult 1955; Zeitlin, Lutterman, and Russell 1973). They also had lower AFQT scores (Gimbel and Booth 1996). An association between combat exposure and later outcomes may simply reflect the pre-service differences between those who saw combat and those who did not.

Data and methods

Data

The following analyses are based on data from the Panel Study of Income Dynamics (PSID), a longitudinal survey of families and individuals, which has been conducted since 1968 (Hill 1992). The original PSID sample consisted of a nationally representative sample of 3,000 families and an over-sample of 2,000 low-income families. This original sample has been supplemented by what the PSID refers to as “split-offs,” children of the original sample members, as well as spouses who divorce and form new families. Between 1990 and 1995, the sample also included a supplementary sample of Latinos. The PSID is a unique resource for assessing how combat relates to the ability to work. It is the only nationally representative survey including respondents born in a wide range of years that contains measures of pre-service characteristics, such as class and race, of military service and combat exposure, and of post-service outcomes, such as work and health. Despite the fact that the PSID includes relatively detailed information regarding military service, these data appear not to have been used to examine questions about veterans.

The analyses focus on a sub-sample selected on the basis of gender and age. They draw data from all available waves of the survey between 1968 and 2003. (In a previous version [available on request], the paper addressed non-random selection into the military by basing the analyses only on data from respondents who served in the armed forces. The substantive results are similar.) The analyses are limited to men, because the survey did not ask women about combat. They focus on the men who responded to the wave that asked detailed questions about military service, the 1994 wave. They draw, however, on data provided by these men during all waves of the survey between 1968 and 2003. In each of those survey years, men are included in the sample if they were between 25 and 55 years old. Thus, for example, if a man responded to the survey in 1994 when he was 80 years old, and also responded to the survey in 1968 when he was 54 years old, he is included in the analyses. If a 25 year old man became part of the sample in 1975 because he was the son of a respondent to the 1968 survey and then remained in the sample and answered the questions asked in 1994, he is also included in the analyses. Among those who served in the military, men are included after they completed their military service. They are excluded from the sample while they are in the armed forces because the data do not include information about the timing of combat exposure during service. The descriptive statistics are calculated with and without the survey weights that are used to correct for sample design and differential response rates. The statistical models are based on unweighted data.

Predictors

In every wave of the PSID, respondents reported whether or not they had served in the military. However, they only reported if they were exposed to combat in one wave, in 1994. Therefore, the analyses are based on measures of veteran status and of combat exposure reported in that year. They focus on a measure of military status based on a question that asked “Were you ever on active duty in the military service?” The measure of combat is derived from a question that asked if respondents who reported that they had served in the military had ever “fired a weapon against the enemy or come under enemy fire.” If the respondents who served in the military answered yes to this question, they are classified as being combat veterans. If they answered no, they are classified as non-combat veterans.

Table 1 presents descriptive statistics regarding how the men in the sample differ if they were non-veterans, non-combat veterans, or combat veterans on the key predictor variables. (For more detail on how most of the other variables are coded, please access the online supplement.) The table describes the characteristics of the respondents who participated in

the 1994 wave of the survey and were between 25 and 55 years old in any year between 1968 and 2003. It shows historical differences between combat and non-combat veterans. It is based on the least restricted sample ($n = 6,967$), that of all men who reported in any survey year whether or not they were employed. This table looks similar to ones based on the men included in the analyses of whether men were disabled ($n = 6,966$) or whether or not they were looking for work ($n = 6,895$). (These other tables are available on request.) The table presents the unweighted statistics, which suggest different rates, but reveal similar patterns to the weighted ones. (The weighted statistics are also available on request.) According to the table, combat veterans were born, on average, six years earlier than non-combat veterans. They were born 15 years earlier than non-veterans. These birth-year differences result from the historical context of service. Combat veterans were most likely to have become eligible to serve in the military during World War II and the Vietnam war. Non-combat veterans, by contrast, were most likely to have become eligible to serve during the Vietnam and post-Vietnam eras. Non-veterans were most likely to have become eligible to serve during the post-Vietnam era.

Combat veterans systematically differed from other men in terms of their family characteristics. They were less likely than non-combat veterans and non-veterans to be black or in the “other” race/ethnic category. They were more likely than these other men to have grown up in poor and less likely to have grown up in well-off families. They were also more likely than the rest of the sample to have had less educated parents and less likely than non-combat veterans to have had more educated parents. These findings are partly consistent with previous research regarding the characteristics of the men who fought and died in U.S. wars (Gimbel and Booth 1996; Mayer and Hoult 1955; Zeitlin et al. 1973).

Outcomes

The analyses evaluate the effects of combat on socioeconomic attainment by looking at disability and unemployment, outcomes that are logically prior to those used in much previous research on socioeconomic attainment.² Many previous researchers have assessed the effects of people’s characteristics or experiences on their socioeconomic attainment by looking at how much people earn or the status of their occupations, thereby excluding people who are not employed. Blacks, for example, tend to earn less and have lower wages than whites (Elman and O’Rand 2004). People who grew up with less privileged parents are likely to have lower status as adults than those who grew up with more privileged parents (Blau and Duncan 1967). Because they have focused on the characteristics of jobs, many researchers have limited their analyses to people who are working. They tend not to assess whether people face obstacles to working or to entering the labor force. Yet the ability to work is inextricably linked to socioeconomic attainment. People who are unemployed, for example, are less likely to get jobs later in their lives. When they return to work, they earn less and work at lower quality jobs (Gangl 2006). People also report earning less and working fewer hours if they previously reported being disabled (Mok, Meyer, Charles, and Achen 2008).

Disability—The paper, therefore, assesses whether combat veterans are more likely than other men to report a work-related disability. Previous researchers have assessed whether or not combat veterans are more likely than non-combat veterans to become disabled, but have focused on this question from medical and psychiatric perspectives (e.g. Martz, Bodner, and Livneh 2009). Social science researchers have not assessed whether combat veterans suffer disabilities. They have, however, examined the effect of combat on other physical and mental health outcomes (e.g., Elder et al. 1994). In the current set of analyses, the disability

²See online supplement for discussion of how these outcomes overlap.

measure is based on a question asked in each survey year between 1968 and 2003 that asked whether or not the respondents had “a physical or nervous condition that limits the type of work, or the amount of work you can do?” If respondents answered yes to the question, they are coded with a 1; if they answered no, they are coded with a 0.

Unemployment—The analyses build on previous research by examining change over time in the odds of unemployment. Vietnam veterans had more difficulty finding and keeping work if they experienced combat than if they did not (Prigerson et al. 2002; Savoca and Rosenheck 2000). The analyses explore the impact of combat on the ability to work according to two measures. Both measures are based on the question: “We would like to know about what you do – are you working now, looking for work, retired, a student, (a housewife), or what?” In both measures, respondents are coded 0 if they are employed. In the first measure, they are coded 1 otherwise. According to this measure, they could have been unemployed for a number of reasons, including staying at home, attending school, being retired, or being disabled. The second measure assesses whether men were unemployed according to the formal governmental definition (Department of Labor 2008). According to this formal measure, respondents are coded with a 0 if they were employed and a 1 only if they were looking for work. If they fall into neither category, they are dropped from the analyses.

Methods

The analyses use the longitudinal nature of the data to estimate random-effects logistic regression models that include observations of each respondent at different ages. These models were chosen over the two most likely alternatives, traditional logistic regression models and fixed effects logistic regression models, for several reasons. In contrast to traditional logistic models, they incorporate measures that reflect the fact that repeated observations of a person are not independent, explicitly accounting for the fact that the observations are dependent, or nested, within people (Rabe-Hesketh and Skrondal 2008; Singer and Willett 2003). If people tend to remain unemployed or disabled, the multilevel models will fit better than traditional logistic models. If people do not tend to stay unemployed or disabled, traditional logistic models will fit better than random effects model. These models, therefore, formally represent the veterans’ disability and unemployment trajectories. Another alternative to the random effects models that could also model the longitudinal nature of the data would be a fixed effects model. Fixed effects models are similar to random effects models except that they require that respondents are observed both before and after the treatment or experience of interest, and explicitly exclude characteristics of the respondents that do not change over time. Unfortunately, very few PSID respondents were observed before they entered the military, so fixed effects models cannot shed light on the effects of combat exposure.

The models provide evidence regarding when and how people become disabled or unemployed. If combat veterans, for example, have different initial odds of disability or employment, then the estimate of the effect of combat will differ from zero. This parameter estimate describes the odds that combat veterans were disabled or unemployed immediately after they left the military. If combat veterans differ from non-combat veterans in the rates at which they become disabled or unemployed, then the combat variable will interact with the measure of age. The reported estimates are derived from the reduced form equation, which follows:

$$\text{logit} \left\{ \Pr \left(y_{ij} = 1 | x_{ij}, \zeta_{1j}, \zeta_{2j} \right) \right\} = \beta_1 + \beta_2 x_{ij} + \beta_3 x_{ij}^2 + \Gamma z_j + \zeta_{1j} + \zeta_{2j} x_{ij} + \varepsilon_{ij} \quad [1]$$

Where y_{ij} refers to the outcomes, unemployment and disability, for occasion i and respondent j ; x_{ij} is age; z_j is a vector of constant characteristics, including combat and cohort; and ε_{ij} is the residual. The coefficient β_1 is the intercept; β_2 is the slope of the linear term for age; β_3 is the slope of the quadratic term for age; and A is a matrix of coefficients associated with the constant characteristics. The coefficient ζ_{1j} is the respondent-specific residual associated with the intercept. It allows men to have initial odds of disability or unemployment that differ on the basis of unobserved characteristics from the estimated intercept. The coefficient ζ_{2j} is the respondent-specific residual associated with the slope of age. It allows men to experience changes in the odds of disability or unemployment that differ from the estimated slope, also on the basis of unobserved differences.

Estimates from the models may be affected by people who leave the sample due to attrition. In the current case, the respondents provided the information regarding combat exposure in 1994, 26 years after the first year of the survey. Some of the original respondents left the sample because they did not want to or were not able to continue, and are therefore not included in the analyses. Combat veterans, in particular, may have higher rates of mortality than the general population and are thus less likely to be in the analytical sample. To address concerns about selection, the analyses employ a strategy used in a recent paper evaluating growth curves in the health of PSID respondents that consists of two steps (Willson et al. 2007). First, they calculate how likely members of the original sample were to stay in the sample until 1994. Then, they compare estimates calculated not on the full sample of all respondents, but just on the sub-sample of original respondents who remained in the sample. The resulting analyses of attrition exclude two types of respondents: 1) original respondents who left; and 2) additional respondents who were added to the survey after 1968. (For more detail, see the online supplement.)

Findings

Figure 1 presents the observed proportions of the respondents who were disabled across all survey years and provides preliminary evidence consistent with the view of combat as a scarring experience. In each survey year, men are included in the calculations if they were between 25 and 55 years old. According to the figure, a relatively stable share of non-veterans and non-combat veterans were disabled, with rates fluctuating around 10 percent. Non-veterans were disabled slightly more often than were non-combat veterans. Compared to these other two groups of men, combat veterans were disabled at relatively high rates. In most survey years, they were more likely to be disabled than non-veterans. In all survey years, they were more likely to be disabled than non-combat veterans. They became increasingly likely to be disabled over time, starting with slightly more than 10 percent of combat veterans being disabled in 1968 and increasing to more than 20 percent in 2003. In part, these findings stem from changes in the historical context of service. As shown in table 1, combat veterans were more likely than non-veterans and non-combat veterans to have become eligible to serve in the earliest time period, during World War II. They were also relatively likely to become eligible to serve during the Vietnam War. Over time, the sample of combat veterans grew older, on average, than the two other samples, which received influxes of new, younger members as the survey added respondents (see description of PSID sample above). Due to their older average age, combat veterans should also be more likely to be in poor health or disabled. The sample of non-combat veterans, however, also grew older, on average, than the sample of non-veterans. Non-combat veterans, however, were still less likely than non-veterans to be disabled. They may have benefited from the fact that they were healthier, on average, than non-veterans because of the physical standards that recruits must meet in order to join the military. Taken together, these findings suggest that combat veterans may be more likely than other men to be disabled because combat contributes to cumulative disadvantage.

Figure 2 is similar to figure 1 and also shows patterns that could be consistent with the cumulative disadvantage account. It presents the observed proportions not of men who were disabled, but of men who were unemployed. Over time, men grew more likely to be unemployed, with approximately 5 percent of men in each of the groups unemployed in the early years of the survey and approximately 10 percent unemployed in the later years. As with disability, men were more or less likely to be unemployed based on their combat and veteran status. In the early years of the survey, non-veterans were the most likely to be unemployed. In most survey years, non-combat veterans were the least likely to be unemployed. In most years after 1975, combat veterans were more likely to be unemployed than both non-veterans and non-combat veterans. This figure suggests that combat may scar the veterans who experience it, leading them to be less able than they would have otherwise been to find work between the ages of 25 and 55, the prime working years.

Combat, disability, and unemployment

The models that follow evaluate whether these observed proportions stem from differences in the characteristics of combat and non-combat veterans, and of non-veterans, such as race, class, age, and cohort differences. Table 3 presents coefficients from random effects logistic regression models that show that, for all ages and cohorts, combat veterans and non-veterans were more likely to be disabled and unemployed than were non-combat veterans. Each respondent is viewed at multiple survey years and, therefore, at multiple ages between 25 and 55. The first two columns contain estimates of the characteristics associated with whether a man answered yes to the question about whether he was disabled. The next two columns contain estimates of the characteristics associated with whether a man was unemployed for any reason. The final two columns contain estimates of the characteristics associated with whether a man was unemployed according to the formal definition and thus looking for a job.

According to these estimates, combat veterans were more likely than other men to be disabled, even after accounting for differences in age, cohort, race, family poverty, and parent's education. Compared to non-combat veterans, men were also more likely to be disabled if they never served in the military. Combat veterans appear to be even more likely than non-veterans to be disabled. The differences in these estimates, however, are not statistically significant. Veterans likely differed from non-veterans in having unmeasured characteristics that made it less likely, on average, that they would have a disability. Veterans likely suffered from combat, however, in ways that counteracted the fact that they should have had better average health than non-veterans. These findings are consistent with the theory that combat creates direct cumulative disadvantage, increasing the odds that people will be disabled throughout their lives if they fight in wars.

The first two columns in table 3 also show that the odds of disability were affected by age, family background, previous employment, and, to a limited extent, cohort. Men became more likely to report that they were disabled as they grew older. They were more likely to be disabled if they grew up in poor and well-off families than if they grew up in families with average finances. They were also more likely to be disabled if their mothers had less education, or if they did not report their mothers' education, than if their mothers just completed high school. According to the estimates in the first column, men were less likely to be disabled if they became eligible to serve in the World War II era than if they came of age during the Vietnam war, and more likely to be disabled if they became eligible to serve in the post-Vietnam era. Among combat veterans, these effects of cohort may stem from historical changes in medical and transportation technology. As mentioned above, soldiers have been more likely to be wounded rather than to be killed in more recent years, because doctors are now able to save the lives of soldiers who might have died in previous wars (Gawande 2004). The effects of cohort, however, appear to be mediated by the effect of

previous employment. According to the estimates in the second column, previously employed men were less likely to report being disabled than previously unemployed men. The effect of previous employment appears to mediate the association between cohort and disability and to partially mediate the association between combat and disability.

The table leads to similar conclusions regarding how men came to be unemployed, though cohort affects unemployment more strongly than it does disability. As with disability, combat veterans were both more likely to be unemployed for any reason than non-combat veterans and more likely to be looking for work. Non-veterans also had greater odds of unemployment than non-combat veterans. The estimate of the association between being a non-veteran and unemployment is smaller than the estimate of the association between being a combat veteran and unemployment. In contrast to the case with disability, the effect of cohort is larger and consistently significant. When age is held constant, as it is in these models, men were more likely to be unemployed with each succeeding cohort. Men were less likely to be unemployed if they became eligible to serve in the military during the World War II, Korean, and post-Korean eras than if they came of age during the Vietnam and post-Vietnam eras. This finding suggests that at least some of the effect of era on unemployment may stem from cohort effects, specifically from the fact that men have become less likely to be employed historically.

Columns 4 and 6 suggest that, because combat veterans are more likely to be disabled, they are more likely to become discouraged in the labor market. Similar to column 2, these columns each incorporate a measure derived from the previous year, this time of disability. According to the estimates of the effects of this measure, men were more likely to be unemployed if they were disabled than if they were not disabled in the previous year. Previous disability increased the odds that a man would be unemployed for any reason by a large amount and increased the odds that a veteran would be looking for work by a relatively smaller amount. In addition, it did not mediate the effect of combat on the odds that a veteran would be looking for work, but did mediate that effect on the odds that a veteran would be unemployed for any reason. Combat indirectly increased unemployment, in part, by increasing disability. Combat veterans were more likely to be disabled and thus also less likely to be working. Taken together these findings suggest that combat veterans are more likely than non-combat veterans to be disabled when they leave the military. Because of these disabilities, they have trouble working, leading them to stop looking for work, and therefore to leave the labor force. These findings present further evidence that combat veterans experience direct cumulative disadvantage.

Figure 3 presents predicted probabilities of disability by age and combat status, demonstrating that combat veterans were somewhat more likely than non-veterans and much more likely than non-combat veterans to be disabled throughout the work life. It is based on a regression that includes combat, cohort, and age effects. (According to this regression, the estimates of the effects of the variables of interest, combat veteran, non-veteran, cohort, and age do not statistically differ from the estimates of those effects presented in table 3. These regression results are available by request.) Because the differences in disability by cohort are so small, the figure presents the results for combined cohorts to provide a clearer presentation. The thick solid line represents the probability that combat veterans would be disabled if they became eligible to serve in the post-World War II to Vietnam eras. The thinner solid line represents the probability that non-combat veterans would be disabled. The dotted line represents the probability that non-veterans would be disabled. All men grew increasingly likely to be disabled regardless of combat experience as they grew older. They were more likely to be disabled if they saw combat than if they did not, which is consistent with a view of combat as contributing to direct cumulative disadvantage.

Figure 4 presents the predicted probabilities that different types of men would be unemployed for any reason, demonstrating how these probabilities varied with combat exposure, cohort, and age. It is derived as described above regarding figure 1. Though the measure of age affects the log odds of unemployment in a linear fashion, it affects the predicted probability in a curvilinear fashion. Thus, men faced an initial decrease in the probability that they would be unemployed after their mid-twenties, followed by an increase in that probability. Nevertheless, the figure shows that veterans of all eras had a higher probability of being unemployed if they saw combat than if they did not. Non-veterans experienced probabilities of unemployment that were between those experienced by combat and non-combat veterans. In the interests of clarity, these values are not included in the figure. Combat veterans did not close the gap as they aged, which provides further evidence consistent with the direct cumulative disadvantage account.

The figure also demonstrates differences between men according to cohort. Veterans were more likely to be unemployed throughout the work life if they served in more recent eras than if they served during earlier eras. All men were less likely to be unemployed, for example, if they became eligible to serve during the Korean era than if they became eligible to serve in the Vietnam era. These findings lead to two possible conclusions. First, men who came of age earlier in the century may have had different average characteristics from men who came of age later in the century. Selection may explain a portion of the different effects by cohort. Second, the effect of cohort on unemployment may stem from historical changes. Indeed, men have become increasingly likely to be unemployed over the preceding decades.

Testing whether the effects of combat differ

To evaluate whether combat affected the members of different groups differently, I also conducted tests (available on request) for interactions between, on the one hand, combat and, on the other, race and family background, which suggest that the effects of combat do not differ by these characteristics. If a model with an interaction fit better than one without, this finding could be consistent with either the moderated cumulative disadvantage or the negative turning point hypotheses. Such a model would indicate that soldiers are affected by combat differently depending on the characteristics they had before combat. If a model without interactions fits better than the models with interactions, this finding suggests that combat contributes not to moderated cumulative disadvantage or a negative turning point, but to direct cumulative disadvantage. According to the direct cumulative disadvantage account, soldiers are potentially affected by combat in the same fashion regardless of race or family background. A table containing these fit statistics is available on request. It shows that, regardless of outcome, a model without interactions fits better than models with interactions. These findings suggest that the effects of combat are not consistent with either the moderated cumulative disadvantage or negative turning point hypotheses, but rather with the direct cumulative disadvantage hypothesis. They suggest that combat did not affect veterans differently based on their family or racial backgrounds, but potentially affected all veterans regardless of such characteristics.

Testing the impact of attrition

As shown in table 3, sample attrition had little effect on the estimates of the effects of the relationship between combat and the outcomes. Men were less likely to leave the sample between 1968 and 1994 if they had higher propensity scores (as described in the online supplement). Those who were more likely to remain in the sample were also less likely to be disabled, unemployed, or looking for work. Yet, after taking attrition into account, combat veterans were still more likely than non-combat veterans to experience difficulties in their later work lives. In the case of disability, the point estimates of the effects of being a combat veteran are smaller than in table 2, while in the case of unemployment they are larger. They

also have larger standard errors because they are estimated less precisely in this smaller sample, which is restricted to just men who participated in both the 1968 and 1994 waves of the survey, therefore excluding men who became veterans after 1968, the latter years of the Vietnam war. Nevertheless, the patterns in the table suggest that veterans continue to be negatively affected by combat, which increases disability and unemployment even in models that include controls for non-random attrition.

Conclusion

The findings suggest that combat increased rates of disability and unemployment among veterans, which is consistent with the view that combat is a scarring experience. Veterans who saw combat started their work lives at a relative disadvantage that they were not able to overcome. If they were exposed to combat, they were more likely than non-combat veterans to be disabled and unemployed in their mid-twenties and remained so throughout the work life. Policymakers and citizens should keep in mind these long-term consequences of war as US soldiers continue to fight in Iraq and Afghanistan.

As these wars continue, future combat veterans will likely suffer as have past combat veterans in their socioeconomic attainment because they sustain mental and physical injuries in battle. As the preceding analyses showed, combat veterans were more likely than non-combat veterans to report work-related disabilities, which may or may not stem from the mental or physical wounds of war. Indeed, previous researchers have shown that combat veterans suffer not just from PTSD, but from other mental disorders, such as anxiety and depression (e.g., Hoge, Castro, Messer, McGurk, Cotting, and Koffman 2004). These veterans are more likely to commit suicide, and to behave criminally or violently (e.g., Fontana and Rosenheck 1995). When they return from combat, they are more likely than when they left to describe themselves as physically unhealthy (Armed Forces Health Surveillance Center 2009). Researchers have recently begun to evaluate how combat affects the physical and mental health of the service-members who are returning from Iraq and Afghanistan (Hoge et al. 2004; Tanielian and Jaycox 2008). The preceding analyses suggest that these returning service-members may also suffer in terms of their later ability to work. Future research should examine the extent to which the people who have fought in these more recent wars also experience difficulties working and the extent to which these effects persist throughout their lives.

Throughout history, some veterans have experienced combat while others have not, which may have led some veterans to have higher and some lower socioeconomic attainment than non-veterans (e.g., Teachman and Tedrow 2004). As described at the outset, some veterans have been negatively and others positively affected by serving in the armed forces. These divergent findings could stem from the fact that different types of veterans: 1) had different experiences or 2) responded differently to the same experiences. The preceding findings suggest that the effects of combat were potentially negative regardless of pre-service status and that that less privileged veterans were as negatively affected by combat as were more privileged veterans. They are consistent with some previous research regarding race and military service. According to previous research, blacks have also historically been more likely to benefit from military service than have whites (e.g., Teachman and Tedrow 2004). They were historically excluded from combat during World War II and only integrated into combat units and the military more broadly in the decades after that war (Moskos and Butler 1996). Among the men in the sample used in the preceding analyses, blacks were less likely than whites to have experienced combat. They may benefit less from service in the present than they have in the past, because today they are both more likely to serve and to fight.

As mentioned above, the armed forces screen potential recruits and service-members for good health, which poses the analyses with two potential problems. First, the military may have enlisted troops who were, on average, healthier in some than in other historical eras. Veterans of different eras could therefore differ from each other in terms of their health regardless of their experiences. To deal with this problem, the analyses allow the average health of veterans to vary over historical time by including a measure of cohort. Second, veterans may have enlisted in the military with better average health than comparable non-veterans, while combat veterans may have enlisted with better health than non-combat veterans. Unfortunately, the survey respondents in the current case did not provide information about their health before they served in the military, which would allow researchers to assess whether combat veterans, non-combat veterans, and non-veterans differed independently of military service and combat exposure. Combat veterans are probably more similar to non-combat veterans than both groups of men are to non-veterans. The current analyses, therefore, primarily compare combat veterans to non-combat veterans, but retain details about the experiences of non-veterans. They may understate the negative effect of combat if there is a “healthy warrior” effect.

Previous research has also shown that the people who served in the military and in combat roles differed not just on the basis of health but also on the basis of other personal and family characteristics. The preceding analyses incorporated measures of the respondents’ race and class. However, some research has shown that combat and non-combat veterans differed from each other in terms of their personal characteristics, such as their cognitive scores and testosterone levels (Gimbel and Booth 1996). Lower cognitive test scores and higher testosterone levels may make it more likely that men will be disabled or unemployed. The preceding analyses may therefore overstate the negative effect of combat.

The analyses use a measure of combat that is derived from self-reports, which are possibly limited, but still useful. Veterans may be more likely to report combat exposure if they are unhealthy or they are currently disabled. Previous research has shown, for example, that some veterans inaccurately reported that they had seen combat in Vietnam when they later requested assistance from Veterans’ Affairs (VA) clinics (Frueh, Elhai, Grubaugh, Monnier, Kashdan, Sauvageot, Hamner, Burkett, and Arana 2005). A recent study, however, compares results from a national survey of Vietnam veterans to archival data and suggests that self-reports accurately reflect combat exposure in a survey setting (Dohrenwend, Turner, Turse, Adams, Koenen, and Marshall 2006). Previous researchers have also debated whether soldiers actually fire their weapons on the battlefield. One classic work argued, for example, that fewer than 25 percent of soldiers at the front during World War II fired their weapons (Marshall 1978). The current analyses use a measure of combat that is based on a question that asked veterans to report how they behaved, specifically whether they had “fired a weapon against the enemy or come under enemy fire.” This relatively strong measure reflects not just whether veterans served as combat troops or in war zones, but whether they exchanged fire. It seems unlikely that veterans would recall this experience inaccurately. Nevertheless, future research should compare such self-reports to administrative data.

Any analysis of the impact of wars must also deal with the possibility of differential mortality or attrition. It must consider the possibility that the people who were most affected did not remain in the population because they died in combat. Service-members may also be disproportionately likely to drop out of longitudinal surveys because of poor health, early mortality, or low status. If these people are more negatively affected by their combat exposure than those who remained, the analyses may underestimate of the impact of combat. The preceding analyses address this possibility, in part, by estimating models using data from members of the original sample who were still in the survey by 1994.

Despite these caveats, the analyses contribute to previous research and theory regarding the relationship between health and socioeconomic attainment. According to this previous work, people with lower socioeconomic status have worse health and die when they are younger than those with higher socioeconomic status (Kitagawa and Hauser 1973). Subsequent research has assessed whether health may also affect socioeconomic attainment. This work suggests that there are reciprocal paths between health and socioeconomic attainment (Smith 1999). Consistent with this view, the current analyses showed that veterans were negatively affected by combat in both their health and their ability to work.

The current analyses may also shed light on the role in health inequality of health care. Some previous research suggests that this inequality at least partly stems from the fact that rich people can afford better health care than can poor people (Williams and Collins 1995). According to the current research, poor and minority veterans were no more negatively affected by combat than rich and white veterans in terms of their rates of disability. Veterans have traditionally had better access than civilians to health care, receiving it through the VA. The VA provides health care that is of better quality, on average, than that available through civilian providers (Asch, McGlynn, Hogan, Hayward, Shekelle, Rubenstein, Keesey, Adams, and Kerr 2004). This better health care may ensure that combat has a direct effect rather than a moderated one. Disadvantaged veterans may be as well equipped as advantaged veterans to recover from the negative effects of combat because of their relatively equal access to health care. If this is the case, the military may provide a counterfactual environment, as it has in other contexts (e.g., Lundquist 2008), to examine the importance for health inequality of access to and quality of health care. Future researchers could evaluate how health shocks, such as accidents and illnesses, affect the health of veterans and non-veterans differently. In so doing, they could evaluate the consequences of the fact that the government may provide more equal and higher quality health care not to all citizens, but just to those who have risked injury and death in wartime. This research could assess whether health disparities are created or maintained by inequality in the civilian health care system.

The current analyses also contribute to research and theory regarding the impact on people's lives of potentially traumatic events such as wars, natural disasters, and economic crises. Previous research on such events has found that the effects differ by race, class, and age. Low-income black workers, for example, were more likely to lose their jobs after they survived Hurricane Katrina than were white workers (Elliott and Pais 2006). Among Germans, people who were in their teen years and finishing their education were more negatively affected by living through World War II than were the soldiers who served in the armed forces during that war (Mayer 1988). By contrast, men who came from families that suffered economically during the Great Depression were not negatively affected by their childhood experiences in their adult socioeconomic attainment (Elder 1974). The varied findings of this previous research suggest that historical events affect people differently according to a number of dimensions, including age, pre-event characteristics, and time since the event. However, such events may have more persistent and randomly distributed negative effects if, as in the current case, they directly affect health. As the preceding findings show, they leave those who suffer them at an initial disadvantage, which continues throughout the work life.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Figure 1.
Observed proportions disabled by year and combat status

Figure 2.
Observed proportions unemployed by year and combat status

Figure 3.
Predicted probabilities of disability by age and combat status

Figure 4.
Predicted probability among veterans of unemployment by age, combat status, and cohort

Table 1

Selected characteristics of non-veterans, non-combat veterans, and combat veterans

	Non-veteran	Non-combat veteran	Combat veteran
Birthyear	1955.01 (11.96)	1946.81 (13.48)	1940.72 (14.07)
Era became eligible for military service			
World War II	0.04	0.09	0.27
Korea	0.04	0.14	0.10
Post-Korea	0.11	0.18	0.12
Vietnam	0.23	0.27	0.38
Post-Vietnam	0.59	0.32	0.13
Race (ref: white)			
Black	0.25	0.24	0.20
Other	0.23	0.10	0.08
Family finances (ref: average/varied)			
Poor	0.37	0.39	0.45
Well-off	0.23	0.20	0.17
Missing	0.03	0.02	0.02
Mother's education (ref: HS grad)			
<HS	0.38	0.39	0.42
College grad	0.31	0.35	0.33
Missing	0.18	0.14	0.18
Father's education (ref: HS grad)			
<HS	0.44	0.49	0.56
College grad	0.22	0.24	0.20
Missing	0.19	0.14	0.15
Number of observations	5,124	1,297	546

Note : Statistics are derived from male household heads in the 1994 PSID who were between 25 and 55 years of age in any survey year between 1968-2003. Standard deviations in parentheses.

Table 2

Random-effects logistic models of disability and unemployment

	Disabled		Unemployed for any reason		Unemployed, looking for work	
	(1) Baseline	(2) Lag employ	(3) Baseline	(4) Lag disable	(5) Baseline	(6) Lag disable
Fixed part						
Combat/veteran status						
Combat veteran	0.938 *** (0.228)	0.865 *** (0.207)	0.554 ** (0.182)	0.469 ** (0.158)	0.429 ** (0.164)	0.383 * (0.159)
Non-veteran	0.632 *** (0.143)	0.571 *** (0.131)	0.211 (0.109)	0.149 (0.097)	0.228 * (0.099)	0.196 * (0.096)
Age	0.220 *** (0.016)	0.217 *** (0.015)	0.014 * (0.006)	0.015 ** (0.006)	-0.028 *** (0.007)	-0.028 *** (0.007)
Age-squared	-0.004 *** (0.000)	-0.005 *** (0.000)				
Era eligible to serve (ref: Vietnam war)						
World War II	-0.574 (0.295)	-0.211 (0.266)	-2.445 *** (0.307)	-2.069 *** (0.254)	-1.956 *** (0.274)	-1.886 *** (0.268)
Korean War	-0.411 (0.253)	-0.204 (0.226)	-1.176 *** (0.216)	-1.028 *** (0.185)	-0.891 *** (0.197)	-0.870 *** (0.191)
Post-Korean era	-0.012 (0.181)	0.080 (0.164)	-0.372 ** (0.145)	-0.338 * (0.126)	-0.286 * (0.130)	-0.281 * (0.126)
Post-Vietnam era	0.269 * (0.132)	0.026 (0.123)	0.566 *** (0.101)	0.534 *** (0.090)	0.413 *** (0.090)	0.409 *** (0.088)
Employed, previous year		-1.488 *** (0.051)				
Disabled, previous year				1.830 *** (0.052)		0.880 *** (0.063)
Race/ethnicity (ref: non-hispanic white)						
Black	-0.020 (0.137)	-0.151 (0.126)	1.185 *** (0.102)	1.158 *** (0.090)	1.080 *** (0.090)	1.082 *** (0.087)
Other	-0.136 (0.164)	-0.111 (0.152)	0.601 *** (0.125)	0.636 *** (0.111)	0.586 *** (0.112)	0.606 *** (0.109)
Family finances (ref: average/varied)						

	Disabled		Unemployed for any reason		Unemployed, looking for work	
	(1) Baseline	(2) Lag employ	(3) Baseline	(4) Lag disable	(5) Baseline	(6) Lag disable
Poor	0.826 *** (0.135)	0.759 *** (0.124)	0.423 *** (0.103)	0.290 ** (0.092)	0.278 ** (0.092)	0.242 ** (0.090)
Well-off	0.373 * (0.147)	0.321 * (0.137)	0.262 * (0.111)	0.175 (0.100)	0.198 * (0.100)	0.179 (0.098)
Missing	0.014 (0.332)	0.053 (0.310)	0.163 (0.246)	0.135 (0.220)	0.173 (0.218)	0.163 (0.212)
Mother's education (ref: high school graduate)						
Less than high school	0.363 * (0.150)	0.321 * (0.138)	0.345 *** (0.114)	0.316 ** (0.101)	0.284 ** (0.101)	0.270 ** (0.098)
College graduate	0.087 (0.192)	0.080 (0.178)	0.178 (0.145)	0.146 (0.131)	0.063 (0.133)	0.057 (0.130)
Missing	0.613 ** (0.219)	0.543 ** (0.201)	0.647 *** (0.167)	0.562 *** (0.148)	0.378 * (0.148)	0.354 * (0.144)
Father's education (ref: high school graduate)						
Less than high school	0.087 (0.159)	0.092 (0.147)	0.126 (0.120)	0.136 (0.108)	0.200 (0.107)	0.204 (0.104)
College graduate	-0.305 (0.197)	-0.278 (0.183)	-0.171 (0.150)	-0.114 (0.136)	-0.304 * (0.139)	-0.281 * (0.136)
Missing	0.240 (0.229)	0.202 (0.211)	0.301 (0.173)	0.303 * (0.154)	0.361 * (0.152)	0.362 * (0.149)
Intercept	-7.923 *** (0.261)	-6.130 *** (0.247)	-5.640 *** (0.176)	-5.536 *** (0.158)	-5.179 *** (0.157)	-5.171 *** (0.153)
Random part						
Variance of intercept	16.248 *** (0.980)	14.333 *** (0.876)	8.349 *** (0.483)	7.294 *** (0.419)	3.736 *** (0.293)	3.596 *** (0.283)
Variance of slope of age	0.044 *** (0.003)	0.037 *** (0.002)	0.038 *** (0.002)	0.028 *** (0.001)	0.010 *** (0.001)	0.010 *** (0.001)
Covariance int. and yrs	-0.557 *** (0.043)	-0.484 *** (0.039)	-0.345 *** (0.023)	-0.304 *** (0.020)	-0.067 *** (0.014)	-0.071 *** (0.014)
-2 log likelihood	37,394	36,542	37,469	36,244	25,214	25,034
Number of respondents	6,834	6,834	6,834	6,834	6,736	6,736
Number of observations	85,398	85,398	85,487	85,487	81,353	81,353

Note: Standard errors in parentheses.

p<.001

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p<.01
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p<.05
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Table 3
Random effects logistic models of disability and unemployment among men present in both 1968 and 1994 waves

	Disabled		Unemployed, any reason		Unemployed, looking for work	
	W/o score	With score	W/o score	With score	W/o score	With score
Fixed part						
Combat	0.596 0.426	0.609 0.420	0.945 * 0.396	0.979 ** 0.379	0.564 0.311	0.580 0.304
Non-veteran	1.238 *** 0.306	0.818 ** 0.312	0.875 ** 0.279	0.413 0.274	0.438 * 0.219	0.178 0.219
Age	0.273 *** 0.036	0.284 *** 0.036	0.107 *** 0.018	0.120 *** 0.018	-0.010 0.016	0.003 0.016
Age squared	-0.005 *** 0.001	-0.005 *** 0.001				
Cohort (ref: Vietnam war)						
World War II	-0.338 0.583	-2.303 *** 0.685	-2.527 *** 0.511	-4.671 *** 0.586	-1.602 *** 0.391	-2.787 *** 0.453
Korean War	-0.314 0.568	-1.418 * 0.607	-1.157 * 0.458	-2.340 *** 0.475	-0.883 ** 0.342	-1.557 *** 0.362
Post-Korean era	-0.161 0.555	-0.621 0.569	-0.689 0.433	-1.172 ** 0.426	-0.527 0.308	-0.787 * 0.311
Propensity score		-1.295 *** 0.230		-1.477 *** 0.202		-0.842 *** 0.156
Intercept	-8.585 *** 0.741	-7.305 *** 0.769	-7.279 *** 0.596	-5.888 *** 0.603	-4.836 *** 0.423	-4.088 *** 0.437
Random part						
Variance of intercept	29.767 *** -3.706	31.563 *** -3.892	21.252 *** -3.027	22.978 *** -3.225	3.639 *** -0.895	4.098 *** -0.961
Variance of slope of age	0.062 *** -0.006	0.062 *** -0.006	0.057 *** -0.006	0.057 *** -0.006	0.010 *** -0.002	0.009 *** -0.002
Covariance of int and age	-1.048 *** -0.134	-1.099 *** -0.139	-0.853 *** -0.116	-0.926 *** -0.123	-0.070 * -0.033	-0.092 ** -0.035
Number of individuals	1,259	1,259	1,260	1,260	1,254	1,254
Number of observations	22,355	22,355	22,391	22,391	21,313	21,313

Note : Standard errors in parentheses.

p<.001

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p<.01
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p<.05
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