

## The Influence of Military Service Experiences on Current and Daily Drinking

Andrew S. London, Janet M. Wilmoth, William J. Oliver, and Jessica A. Hausauer

The U.S. Department of Veterans Affairs (VA) estimates that 4,743,108 veterans with a service-connected disability received VA Disability Compensation in 2018.<sup>1</sup> Increased alcohol consumption among veterans is associated with traumatic military service experiences and harms,<sup>2,3</sup> and may contribute to liver disease, social and functional impairments, and veteran suicide.<sup>4</sup> It is estimated that 13.6% of veterans have an alcohol use disorder<sup>4</sup> and many more are heavy or binge drinkers.<sup>2-4</sup> While veterans with a service-connected disability have priority access to VA healthcare services and use them to a substantial degree,<sup>5</sup> many veterans live with unmet needs for care.

To date, few studies have compared alcohol use among nonveterans and veterans with diverse military service experiences, and no study has examined everyday (daily) drinking. In our study, we focus on daily drinking because it may represent a form of self-medicating among veterans who were harmed by their military service. The possibility that some veterans self-medicate with alcohol as a substitute for seeking VA services or other professional healthcare is concerning because it may mean that veterans are not getting the healthcare and social supports they need to be well.

We use population-representative data collected from males age 18 and older from eight states that included the Veteran Health module in the 2010 and 2011 Behavioral Risk Factor Surveillance System. For our analysis, we distinguished four groups who likely had different military service experiences:

- 1) nonveterans;
- 2) non-combat veterans without a psychiatric disorder (PD) or traumatic brain injury (TBI);
- 3) combat veterans without a PD or TBI; and
- 4) veterans (non-combat and combat combined) with a PD and/or TBI.

Based on health screenings prior to military service, we assume that the group of veterans with a PD and/or TBI includes a disproportionate number of veterans who were harmed by their military service. While controlling for a range of other factors that influence alcohol consumption, we compare the risk of *current drinking* and *daily drinking* among current drinkers, across these four groups. We define

### KEY FINDINGS

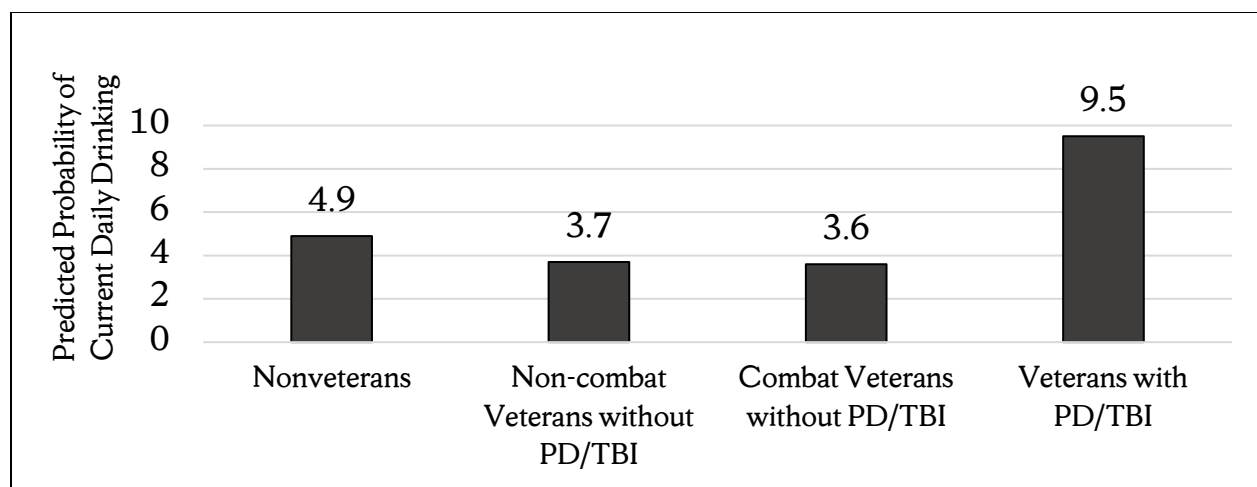
- Veterans with a psychiatric disorder (PD) or traumatic brain injury (TBI) are more likely than nonveterans to be current, daily drinkers.
- Non-combat and combat veterans without a PD or TBI are less likely than nonveterans to be current, daily drinkers.
- Daily drinking may represent self-medicating among veterans who were harmed by their military service.
- Daily self-medicating with alcohol may serve as a substitute for receipt of health services, which may increase some veterans' risk for unmet needs for military service-related health care and alcohol problems.

current drinking as drinking at least one alcoholic beverage in the past 30 days. We define daily drinking as drinking at least one alcoholic beverage each day of the past 30 days. A range of supplemental analyses inform and nuance our interpretation of observed patterns.

### Differential Influences of Military Service

We found differential influences of military service experiences on current and daily drinking. Overall, non-combat veterans without a PD or TBI and veterans with a PD and/or TBI, respectively, were more likely to be current drinkers (i.e., drank at least one alcoholic beverage in the past 30 days), relative to nonveterans. However, combat veterans without a PD or TBI were similar to nonveterans with respect to current drinking. Not all veterans drink or drink more than nonveterans.

Given our definitions, only current drinkers can be daily drinkers. Thus, daily drinking is examined among the subpopulation of current drinkers. As shown in Figure 1, harmful military service experience (indicated by the presence of a PD and/or TBI) is associated with a higher likelihood of daily alcohol consumption (i.e., drinking at least one alcoholic beverage each day for the past 30 days). Specifically, veterans with a PD and/or TBI are significantly more likely than the other three groups to be current daily drinkers. For example, veterans with a PD and/or TBI are about two times more likely than nonveterans to be current daily drinkers. Interestingly, non-combat veterans and combat veterans without a PD or TBI, respectively, are significantly less likely than nonveterans to be current daily drinkers. Our findings suggest that there is a more complicated relationship between daily alcohol consumption and military service than one might have assumed. Some veterans are more likely than nonveterans to be current daily drinkers, while other veterans are less likely.



**Figure 1. Veterans with a Psychiatric Disorder (PD) and/or a Traumatic Brain Injury (TBI) are More Likely to Drink Alcohol Daily than Nonveterans, Non-Combat Veterans without PD or TBI, and Combat Veterans without PD or TBI.<sup>a</sup>**

Data Source: London et al. (2020). "The Influence of Military Service Experiences on Current and Daily Drinking." *Substance Use & Misuse*, 55(8): 1288-1299.

Notes: Predicted probabilities were calculated from a logistic regression model that estimated the influence of different military service experiences on daily alcohol consumption (yes=1, no=0), controlling for age, race, Hispanic ethnicity, education, employment status, income, marital status, number of children in the household, state of residence, and survey year. The model was estimated on sample of current drinkers (N=11,491). For illustrative purposes, the predicted probabilities presented in the figure hold the control variables constant by using the omitted categories for all calculations. The model was estimated using analytic weights.

## **Harmful Military Service Experiences Matter**

Not all veterans drink alcohol or drink alcohol daily, but some do. Generalizations about drinking behaviors among veterans must account for differences in military service experiences. Specifically, trauma and harm resulting in a psychiatric disorder (PD) and/or traumatic brain injury (TBI) seem to play a critical role in the drinking behaviors of veterans. In our study of current daily drinking, we conducted a supplemental analysis that used a dichotomous (yes or no) indicator of veteran status rather than the four categories used for our main analyses. Contrary to our main findings, these supplemental results showed no significant differences in the current daily drinking habits between veterans and nonveterans. In this supplemental analysis, the experiences of veterans with and veterans without a PD and/or TBI were canceling each other out when combined into one large, undifferentiated group. The use of a dichotomous measure of veteran status leads to the incorrect generalization that there is no difference between the drinking habits of veterans and nonveterans. It obscures the possibility that veterans who were harmed by their service might be drinking daily as a form of self-medication. It also hides the fact that most veterans (i.e., non-combat veterans and combat veterans without a PD or TBI) are less likely than nonveterans and veterans with a PD and/or TBI to be current daily drinkers. Both of these findings are relevant for policy, practice, and future research.

## **Recommendations for Policy and/or Practice**

Current daily drinking among veterans may be a form of self-medicating due to service-related trauma or harm. However, it may also be a form of self-medicating across a range of contexts that are unrelated to military service. Researchers should more systematically study current daily drinking as a potential form of self-medicating.

Researchers must move beyond dichotomous measures of “ever versus never” served in the military and collect better data on specific military service experiences and their consequences. Only then will we be able to directly evaluate the circumstances under which everyday drinking functions as a form of self-medicating for veterans. The analyses we present in this paper build upon prior research examining military service experiences and inadequate sleep using the same data and approach.<sup>6</sup> In that study, we documented the same pattern that is depicted in Figure 1. Inadequate sleep was higher among veterans with a PD and/or TBI and lower among non-combat and combat veterans, respectively, without a PD or TBI than among nonveterans. In both studies, we would have missed important policy- and practice-relevant associations between military service experiences and health behaviors if we had used more commonly available measures.

## **Data and Methods**

The Behavioral Risk Factor Surveillance System is an annual, population-based survey of all 50 states, Washington, D.C., Guam, the U.S. Virgin Islands, and Puerto Rico. In each location, the standard core survey is administered to participants along with one or more optional topic modules. We use data from 2010 and 2011 because those were the only years the Veteran Health Module was included. The analytic sample included participants from states that included the Veteran Health Module: Alaska (2011), Kansas (2011), Louisiana (2011), Maine (2011), Nebraska (2010), Nevada (2011), New Jersey (2011), and Tennessee (2010 and 2011). We focus on men because very few women reported combat exposure. Weighted multivariate logistic regression models were used to generate the estimates reported in this brief. For full methodological details and findings, please see the [peer-reviewed publication](#).<sup>7</sup>

## **References**

#### 4 SYRACUSE UNIVERSITY LERNER CENTER FOR PUBLIC HEALTH PROMOTION

1. U.S. Department of Veterans Affairs. (2018). *Annual Benefits Report FY 2018*. <https://www.benefits.va.gov/REPORTS/abr/docs/2018-abr.pdf>
2. Jacobson, I. G., Ryan, M. A. K., Hooper, T. I., Smith, T. C., Amoroso, P. J., Boyko, E. J., Gackstetter, G. D., Wells, T. S., & Bell, N. S. (2008). Alcohol use and alcohol-related problems before and after military combat deployment. *JAMA*, 300(6), 663-675.
3. Ramchand, R., Miles, J., Schell, T., Jaycox, L., Marshall, G. N., & Tanielian, T. (2011). Prevalence and correlates of drinking behaviors of previously deployed military personnel and matched civilian population. *Military Psychology*, 23(1), 6-21.
4. Straus, E., Norman, S. B., Haller, M., Southwick, S. M., Hamblen, J. L., & Pietrzak, R. H. (2019). Differences in protective factors among U.S. veterans with posttraumatic stress disorder, alcohol use disorder, and their comorbidity: Results from the National Health and Resilience in Veterans study. *Drug and Alcohol Dependence*, 194, 6-12.
5. U.S. Department of Veterans Affairs. (2017). *VA Utilization Profile FY 2016*. [https://www.va.gov/vetdata/docs/QuickFacts/VA\\_Utilization\\_Profile.PDF](https://www.va.gov/vetdata/docs/QuickFacts/VA_Utilization_Profile.PDF)
6. London, A. S., Burgard, S. A., & Wilmoth, J. M. (2014). The influence of veteran status, psychiatric diagnosis, and traumatic brain injury on inadequate sleep. *Journal of Sociology & Social Welfare*, 41(4), 49-67.
7. London, A.S., Wilmoth, J.M., Oliver, W.J., & Hausauer, J.A. (2020). The influence of military service experiences on current and daily drinking. *Substance Use & Misuse*, 55(8), 1288-1299.

### Acknowledgements

The authors thank Megan Ray and Shannon Monnat for edits on an earlier version of this brief.

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