



NEWSLETTER

MILLENNIUM COHORT STUDY

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To improve the participant experience and communication with the study team, we invited a select group of study participants in Spring 2023 to provide feedback on their experiences in the study. Their valuable input highlighted a desire for more frequent updates on the project's progress and the impact of their involvement. In response, we've launched this semi-annual newsletter to keep you informed of study progress and showcase the significance of your participation.

To kick off this newsletter series, on the following pages we have included a snapshot of key results from the participant feedback survey we received and summaries of some of the most impactful research findings published by the Millennium Cohort Study team over the years.

Please keep us updated!

- Have you recently moved or changed your email address or your name?
- Visit our website and use the 'Update Contact Info' link at the top right of the page.





Participant Satisfaction with the Millennium Cohort Study

Overall, almost all participants who responded stated that they were satisfied with their experience in the study.

96%



Their main motivation for remaining involved with the study over the years is to give back to their fellow service members and veterans.

Over half of participants who responded indicated that they would like to receive text message reminders about completing their survey.



94% of those who responded are planning to stay engaged with the study until it ends.

What participants are saying about the study:

"I can't remember the DoD ever putting a survey forward to us that has been this detailed and comprehensive. That I can participate in such a survey that will help positively shape military health care I feel is a great privilege. Thanks so much for allowing me the opportunity to participate in such a historically monumental event."

"I'd love to learn more about the results you are obtaining, what studies are being done, based on the data what changes in policy or practice has the study inspired, etc."



Millennium Cohort Study Published Papers

Racial, Ethnic, and Sex Disparities in Mental Health Among U.S. Service Members and Veterans

Although disparities in mental health occur within racially, ethnically, and gender-diverse civilian populations, it is unclear whether these disparities persist within U.S. military populations. This study aimed to examine whether differences exist on the mental health in a large, contemporary sample of U.S. service members and veterans with specific focus on the intersection of race, ethnicity, and sex. This paper is online ahead of print at the *American Journal of Epidemiology*.

Lifetime Traumatic Brain Injury and Risk of Post-Concussive Symptoms

Traumatic brain injury (TBI) is prevalent among active duty military service members, with studies reporting up to 23% experiencing at least one TBI, with 10–60% of those service members reporting at least one subsequent repeat TBI. This study examined the association between multiple TBIs and post-concussive symptoms (PCS), defined as symptoms that follow a concussion or TBI. This paper was published in the June, 26, 2023 issue of *Journal of Neurotrauma*.

The Bi-Directional Relationship between Post-Traumatic Stress Disorder and Obstructive Sleep Apnea and/or Insomnia

This study determined if a bi-directional relationship exists between the development of sleep disorders (obstructive sleep apnea [OSA] and/or insomnia) and existing post-traumatic stress disorder (PTSD), and vice versa; and examined military-related factors associated with these potential relationships. This paper was published in the December 2022 issue of *Sleep Health*.

The Effect of Combat Exposure on Financial Problems

Finances are the most commonly reported stressor for the U.S. population and most Americans experience multiple traumatic events, yet, to the best of our knowledge, this is the first study to measure financial decline following combat exposure. This paper was published in the May 2022 issue of *International Review of Economics and Finance*.

Problematic Anger and Economic Difficulties

The role of problematic anger in relation to economic difficulties is not well understood. This study examined the association of problematic anger with 4 elements of economic difficulties (involuntary job loss, financial problems, unemployment and homelessness) among service members and veterans. This paper was published in the October 25, 2021 issue of *Journal of Affective Disorders*.

The Effect of Combat Exposure on Veteran Homelessness

Homelessness is a serious problem among veterans, but how military service contributes to the risk of homelessness is unclear. This study examined the impact of witnessing another's death (a proxy for measuring combat) on the likelihood of reporting homelessness. This paper was published in the September 2020 issue of *Journal of Housing Economics Information*.

Millennium Cohort Study Published Papers

Posttraumatic Stress Disorder Symptom Clusters in Service Members Predict New-Onset Depression Among Military Spouses

Military operations in Iraq and Afghanistan have brought increased attention to posttraumatic stress disorder (PTSD) among service members and, more recently, its impact on spouses. Existing research has demonstrated that PTSD among service members is associated with depression among military spouses. In the current study, we extended these findings by using data from service member–spouse dyads enrolled in the Millennium Cohort Family Study for which the service member had evidence of PTSD. This paper was published in the September 3, 2020 issue of *Journal of Traumatic Stress*.

Magnitude of Problematic Anger and its Predictors

Problematic anger is intense anger associated with elevated generalized distress and that interferes with functioning. It also confers a heightened risk for the development of mental health problems. This study assess the association of demographics, military factors, mental health, positive perspective, and self-mastery, with subsequent problematic anger. This paper was published in the Jul 27, 2020 issue of *BMC Public Health*.

Risk Factors Associated with Miscarriage and Impaired Fecundity Among United States Servicewomen During the Recent Conflicts in Iraq and Afghanistan

The objective of this study was to evaluate whether military experiences, including combat deployment, deployment length, and life stressors during the conflicts in Iraq and Afghanistan were associated with increased odds for miscarriage or impaired fecundity among U.S. servicewomen. This paper was published in the Feb 1, 2017 issue of *Women's Health Issues*.

Hearing Loss Associated with U.S. Military Combat Deployment

The association between U.S. military service and hearing loss continues to receive significant attention, especially in light of recently completed and ongoing combat deployments in Iraq and Afghanistan. Nearly one-half million U.S. veterans are currently receiving over \$1 billion annually in Department of Veterans Affairs (VA) compensation for hearing loss. The objective of this study was to examine the association between military deployment and subsequent hearing loss. This paper was published in the Jan–Feb 2015 issue of *Noise and Health*.