

SUPPORTING STATEMENT – PART B

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

If the collection of information employs statistical methods, the following information should be provided in this Supporting Statement:

1. Description of the Activity

Millennium Cohort Study (MCS) participants with adolescent children between the ages of 11 to 17 were invited to complete a web-based self-report survey (N=38,031) from November 2022 to February 2023. The responder universe for the Millennium Cohort Study consists of a probability-based sample of active-duty, Reserve, and National Guard members of the US military, identified through service rosters as of October 1, 2000 (Panel 1), October 1, 2003 (Panel 2), October 1, 2006 (Panel 3), October 1, 2010 (Panel 4), and June 1, 2020 (Panel 5). Individuals invited to participate are not chosen based on location. While most invited individuals reside in the United States, service members can be stationed or deployed to almost any area of the world. Invitations are mailed to the current postal address of the service members, regardless of city, state, and country.

Once the MCS participant logged into the web survey hosted on the study website (<https://militarysoar.org/>), they completed consent and HIPAA forms (parent and child), completed the parent survey, and provided contact information for the focal adolescent child identified during the survey. The response rate for the MCS parent was 22% (n=8173). Referred adolescents were invited via email and postal address to complete the SOAR adolescent survey from November 2022 to July 2023. The response rate for invited adolescents was 46% (n=3782). At first follow-up, 7,797 adolescents with parental consent were invited and 4660 responded (60% response rate). Adolescents were recruited to participate in the first follow-up survey via postal (e.g., postcards, pre-incentive packages, letters) and electronic (email invitations, email reminders, link to study website) contacts. The survey launched in November 2024 and closed July 2025. For the second follow-up, the same 7,797 adolescents with parental consent will be invited to complete a survey hosted on the study website. We expect an overall response rate of 60%, resulting in an expected sample size of 4660.

Follow-up assessments are planned at approximately 18-to-24-month intervals until respondents reach age 25. Research findings will shed light on the enduring impact of military life on adolescents and the nature of associations between military-specific experiences and psychosocial health and well-being. Further, this research will assess modifiable risk and protective factors that may elucidate differences in military-connected adolescent psychosocial development and physical health, academic achievement, and educational and military career aspirations over time. Conclusions gleaned from this research will be used to inform existing policy and programs designed to promote adolescent resilience.

2. Procedures for the Collection of Information

- a. Statistical methodologies for stratification and sample selection.

The SOAR sampling frame for the second follow-up survey includes 7,797 adolescents with parental consent.

- b. Estimation procedures;

SOAR plans to adjust for differential attrition at follow-up.

- c. Degree of accuracy needed for the Purpose discussed in the justification;

Important subgroups, such as female service members, Reserve/National Guard, Marines, and married service members were originally oversampled to ensure appropriate representation in the Millennium Cohort Study. As such, there is adequate power to detect meaningful effects in these subgroups. In addition, SOAR recruited veteran service members enrolled in MCS to participate if they had adolescent children, which allows us to represent children after they transition from service.

- d. Unusual problems requiring specialized sampling procedures; and

N/A

- e. Use of periodic or cyclical data collections to reduce respondent burden.

SOAR is a longitudinal study with assessments occurring at approximately 18-to-24-month intervals. Baseline adolescent responders participated at high rates at follow-up **(74%)**. Adolescents with parental consent that did not respond at baseline but were recruited again at follow-up also participated with high frequency **(46%)**, resulting in an overall response rate of **60%**.

3. Maximization of Response Rates, Non-response, and Reliability

The study will employ several approaches to maximize follow-up response rates and reliability.

- The Millennium Cohort Program has an extensive history in developing marketing materials and using validated techniques to maximize response rates using a modified Dillman method consisting of mailings, emails, postcards, and tokens of appreciation, which will be tailored to adolescent-age participants for the current study.
- We will plan to conduct non-response analyses and analyze patterns of missing data to determine if and where bias may exist.
- In order to maximize follow-up response rates, we will offer incentives to participants in the form of \$30 Amazon electronic gift cards for completing a second follow-up survey. Participants will also receive a pre-incentive mailing (less than \$5 value) and will be able to download a certificate of participation in the study after completing each survey wave.

- We have sent, and will continue to send, participants personalized emails with study findings. After baseline survey data were analyzed, participants were mailed a results booklet utilizing infographics to make the results easily understandable by our adolescent cohort. We also send electronic and postal mail requesting new contact information for adolescent participants between survey cycles.
- To share successful recruitment and retention techniques that enhance participant identification with SOAR, we have published a protocol paper: Tannenbaum K and McMaster HS (2024) The Study of Adolescent Resilience (SOAR): a research protocol. Front. Child Adolesc. Psychiatry 3:1346726.doi: 10.3389/frcha.2024.1346726

4. Tests of Procedures

The measures selected for the adolescent survey largely come from national surveys that have been used for decades to produce valid and reliable data, including the Youth Risk Behavior Survey, the National Survey on Drug Use and Health, and the National Survey of Children's Health.

5. Statistical Consultation and Information Analysis

a. Name and telephone number of individual(s) consulted on statistical aspects of the design.

Dr. Hope McMaster, Naval Health Research Center, hope.m.mcmaster.civ@health.mil, 314-458-5107

Dr. Valerie Stander, Naval Health Research Center, valerie.a.stander.civ@health.mil, 619-553-7174

Dr. Sabrina Richardson, Naval Health Research Center, sabrina.m.richardson.ctr@health.mil, 619-553-7598

Dr. Xin Tu, University of California San Diego, x2tu@ucsd.edu, 858-822-7485

b. Name and organization of person(s) who will actually collect and analyze the collected information.

Dr. Hope McMaster, Naval Health Research Center

Dr. Valerie Stander, Naval Health Research Center

Dr. Sabrina Richardson, Naval Health Research Center