2013

State of the Behavioral Health of the United States Coast Guard

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Introduction from Admiral Dollymore

Dear Coast Guard Colleagues,

I am pleased to introduce the second State of the Behavioral Health of the United States Coast Guard report, which provides the first web-based population-level information examining health behaviors of our active duty members. Since 1980, the Department of Defense, through the Office of the Assistant Secretary of Defense (OASD) for Health Affairs (HA), has conducted a Health Related Behavior (HRB) survey approximately every three years to acquire health behavior information on active duty personnel. The Coast Guard participated for the first time in 2008. In 2011, we participated in a first-time web-based survey and worked with ICF International to conduct the USCG portion of the study.

Coast Guard participation in the 2008 and 2011 HRB studies established scientifically valid and reliable baseline information across a broad range of health and health risk behaviors. The 2013 USCG State of the Behavioral Health reports additional in-depth analyses of USCG data . Our ability to anonymously survey our active duty population around risky health behaviors like tobacco/alcohol/drug use as well as capture highly stigmatized and under-reported illness/injury like sexual assault and suicidal behavior will help facilitate the evaluation of policies and programs and the implementation of collaborative, data-driven effective interventions.

CG-11 has reconfigured its Office of Work-Life to comprise a Behavioral Health and Family Services Division. It is my expectation that these Divisions work collaboratively with Health Services and Safety to utilize this data to improve services and to develop prevention, intervention and treatment protocols that impact behavioral health concerns such as stress, anxiety, depression, suicide prevention, substance abuse and sexual assault. This report also provides a "first look" at gay, lesbian and bisexual active duty members in the armed forces.

I wish to thank ICF International and the research team for their efforts in conducting these analyses and preparing these recommendations.

Taken together, the findings from the 2011 HRB survey and the 2013 State of the Behavioral Health report provide the valid, reliable, and timely informational foundation about lifestyle choices and behaviors that affect readiness and the overall wellbeing of the active duty USCG force. It is my hope that stakeholders across our service use this information to enhance mission readiness and improve the quality of life for USCG members.

RADM Maura K. Dollymore, MD,
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I wish to express thanks to the many individuals who have played a key role in the conception, development, and oversight of this report and who contributed to its success. I extend appreciation to RADM Maura K. Dollymore, Mr. Robert L. Skewes and Mr. Mark J. Mattiko and to the members of the U.S. Coast Guard review team for their interest, vision, and support of the study.

A special thank you goes to Mr. Mattiko for his recognition of the value of the USCG data from the Health Related Behavior survey, for his drive to provide a report giving a snapshot of the behavioral health of the USCG, and for his contributions to the report. I am grateful to RADM Dollymore for the personal interest she took in the project, for the guidance she offered regarding the analyses and outline of the report, and for her request and direction to select and involve a working group to review findings and make recommendations and interpretations. I wish to acknowledge Captain Erica Schwartz, Captain Jeffrey Salvon-Harman and Captain Matthew Kleiman for their efforts in effectively shaping the interpretations and recommendations from the analyses. We have been honored to work with these wonderful USCG colleagues and appreciate their focus on rigor in data collection, analysis and interpretation and their passion and concern for the health and well-being of all USCG personnel.

Thanks are also due to ICF International staff listed as report authors and support staff for their many contributions to conceptualizing and conducting the analyses and for their efforts in summarizing findings, preparing tables and figures, and writing the report. Their hard work and attention to quality made my job in shepherding the report to publication a minor one, and it has been an honor to work with each of them.

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Executive Summary

The 2013 State of the Behavioral Health (SoBH) of the United States Coast Guard (USCG) report presents a detailed analysis of health related behaviors among USCG personnel, including physical health; substance abuse, including alcohol, tobacco, and prescription drug use; stress and psychological health; and service commitment. The SoBH also takes a first look at the lesbian, gay, and bisexual (LGB) population in the USCG.

Analyses were conducted using data from the 2011 Health Related Behaviors Survey of Active Duty Military Personnel (HRB), which collected data on the health of the Armed Forces, including the Army, Navy, Marine Corps, Air Force, and Coast Guard active duty personnel. The 2011 HRB is the largest survey that anonymously gathers data on some of the most important behavioral health issues affecting the well-being of the U.S. military. The anonymous nature of the survey, coupled with the statistically-valid selection of a representative sample of service members, enables the Armed Forces to measure the prevalence rates of health behaviors. While the Department of Defense (DoD), each of the DoD Services, and the USCG collect administrative data on the outcomes or consequences of maladaptive health behaviors (e.g., number referred to substance abuse treatment), these administrative data often represent a small fraction of the problem and underscore the need for self-reported measurement of the prevalence rates of these behaviors. The HRB survey ascertains estimates (+/- a small margin of error) of the prevalence of these behaviors and, as a result, provides the Armed Forces with a data source that complements administrative records. The data collected over the past 30 years of this survey have been used by military leadership at all levels to make important policy and programmatic changes.

The 2011 HRB was conducted under the advisement of the Office of the Assistant Secretary of Defense for Health Affairs, TRICARE Management Activity (TMA), and the USCG by ICF International. This was the 11th iteration of the survey. The methodology has undergone extensive updates since the last iteration of the survey in 2008. The extent of the changes precludes direct comparison to prior iterations of the survey; the major changes are summarized in Chapter 2: Methodology.

The target population for the 2011 HRB included all members of the Army, Navy, Marine Corps, Air Force, and Coast Guard who were non-deployed and on active duty at the time of data collection. This report focuses on the results for the USCG.[1] The eligible sample size for the USCG was 14,653 and the total number of usable, eligible USCG respondents to the survey was 5,461. The overall USCG response rate was 37%.

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[1] For a summary of the findings from all services, including the USCG, see the *2011 Health Related Behaviors Survey of Active Duty Military Personnel* report from the Department of Defense and United States Coast Guard.

Invitations and reminders were sent on a staggered start schedule to reduce email and web-based survey server loads and because service branches provided the supporting documentation (e.g., letter of support from command, whitelisting from each component's IT department) at different times. The initial invitation emails to USCG personnel were sent on 4 October, 2011. The last reminder email was sent on 29 December, 2011. The survey was closed on 11 January, 2012.

The following report is organized into 8 chapters: 1) Introduction, 2) Methodology, 3) Physical Health, 4) Substance Use, including Alcohol Use, Tobacco Use, and Prescription Drug Use, 5) Stress and Psychological Health, 6) Lesbian, Gay, and Bisexual Service Members: A First Look, 7) Service Commitment, and 8) Conclusions and Recommendations. Three appendices are also included that describe the constructs measured in the survey, the privacy and consent statement, and the online survey questionnaire. The following Executive Summary provides an overview of the major findings from the 2013 State of the Behavioral Health (SoBH) of the United States Coast Guard report.

Overview of Physical Health

This section presents a summary of indicators of physical health, including obesity, engagement in vigorous exercise, high blood pressure, and high cholesterol. Weight classifications (e.g., obesity) presented in the report are based on Body Mass Index (BMI), an indirect measure of body fat, to detect possible weight problems. Additional details on the findings of this section, as well as a more detailed description of BMI, are presented in Chapter 3.

Among active duty USCG personnel, about one tenth were classified as obese, had been diagnosed with high blood pressure in the past 2 years, or had been diagnosed with high cholesterol in the past two years; the vast majority (over 90%) engaged in vigorous physical exercise in the past 30 days. There were no differences in the four physical health indicators by platform, except for high cholesterol, with the ashore population having a slightly higher prevalence rate than the afloat population.

The strongest covariates of the four physical health indicators included the following:

- Gender was among the strongest covariates for three out of the four physical health indicators. Males had higher levels of obesity, high blood pressure, and high cholesterol; males also had a slightly higher prevalence rate of vigorous physical exercise than females.

- Pay grade also had a strong relationship with three out of the four physical health indicators, with junior enlisted members having a lower prevalence of obesity and high blood pressure than senior enlisted members (i.e., E5-E6, E7-E9), warrant officers, and senior officers (i.e., O4-O10); junior enlisted members also had the lowest prevalence of high cholesterol

compared to the other pay grades. This is likely in part due to a strong correlation between age and pay grade.

- Age group was among the strongest covariates for three out of the four physical health indicators. Those 18 to 25 years old had lower prevalence rates of obesity, high blood pressure, and high cholesterol compared to those 26 to 65 years old.

- Average number of hours of nightly sleep was also among the strongest covariates for three out of the four physical health indicators. Those who reported getting an average of 4 or less hours of nightly sleep were more likely to be classified as obese and to report having high blood pressure than those who reported getting an average of 5 or more hours of nightly sleep; those who reported getting an average of 4 or less or 5-6 hours of nightly sleep were more likely to report having high cholesterol than those who reported getting an average of 9+ hours of sleep.

Overview of Substance Use

This section presents a summary of substance use, including alcohol use and abuse as well as consequences associated with alcohol use; tobacco use, including smokeless tobacco use and attempts to quit or reduce smoking; and prescription drug use, including prescription drug misuse. The alcohol and smoking levels presented in the report are based on items from the 2010 National Health Interview Survey (NHIS), sponsored by the Centers for Disease Control and Prevention (CDC). More details on substance use in the military are provided in Chapter 4.

Alcohol Use

Among active duty USCG personnel, the vast majority (over 90%) were classified as current drinkers. Of current drinkers, one-tenth or less were classified as heavy alcohol users, engaged in hazardous or more severe alcohol use (AUDIT score $\geq$ 8), or experienced alcohol-related consequences, including serious consequences, such as being arrested or sustaining an injury due to drinking, work-related productivity loss, or engaging in risk behaviors, such as driving a car or other vehicle or operating power tools while intoxicated. The afloat community had the highest prevalence rate of heavy alcohol use, hazardous or more severe alcohol use, serious consequences as a result of drinking, and work-related productivity loss as a result of drinking.

The strongest covariates of alcohol use include the following:

- USCG personnel 21 to 25 year olds had the highest prevalence of work-related productivity loss and serious consequences due to drinking compared to service members 18 to 20 years old and 26 to 65 years old.

- Age of onset for alcohol use was among the strongest covariates for five out of the six alcohol-related outcome variables – heavy alcohol use, hazardous or more severe alcohol use, serious consequences resulting from alcohol use, work-related productivity loss due to drinking, and risk behaviors due to drinking. USCG personnel who reported first using alcohol at age 14 or younger had a higher prevalence rate of heavy alcohol use and hazardous or more severe alcohol use, and engaging in risk behaviors due to alcohol consumption, than those who began drinking at age 15 or older; those who reported first using alcohol at age 14 or younger had higher prevalence rates of serious consequences and work-related productivity loss than service members who began drinking at age 18 or older.

- Social network facilitation of alcohol use was also among the strongest covariates for five out of the six alcohol-related outcomes, including current drinking, heavy alcohol use, hazardous or more severe alcohol use, work-related productivity loss, and engaging in risk behaviors due to alcohol use, highlighting the impact of culture on both alcohol consumption and negative consequences due to alcohol use.

- Heavy alcohol use was a very strong covariate for serious consequences, work-related productivity loss, and engaging in risk behaviors due to alcohol consumption, with the prevalence rate of serious consequences, productivity loss, and engaging in risk behaviors being four times as high for personnel who were heavy alcohol users than those who were not.

- Rates of binge drinking (5 or more drinks for men and 4 or more drinks for women on one occasion) in the USCG, at 39.6%, were much higher than the Healthy People 2020 objective of 24.4%.

Tobacco Use

Among active duty USCG personnel, one fifth were current cigarette smokers and one fifth used smokeless tobacco. Just over one tenth of the population, over half of current smokers, were light/moderate or heavy smokers. Of current smokers, three quarters had attempted to quit or reduce smoking in the past 12 months. The afloat community had the highest prevalence rate of current cigarette use, light/moderate and heavy cigarette use, and smokeless tobacco use.

The strongest covariates of tobacco use include the following:

- Pay grade was among the strongest covariates for current cigarette smokers, light/moderate and heavy cigarette users, and attempting to quit and/or reduce smoking. Commissioned officers had substantially lower prevalence rates of current cigarette smokers and light/moderate or heavy cigarette users than warrant officers and enlisted members. Those

in the E7-E9 rank group had the lowest prevalence rate of attempting to quit or reduce smoking compared to E1s-E4s, E5-E6s, and Officers.

- Age of onset for alcohol use was among the strongest covariates for three out of the four tobacco-related outcome variables – current cigarette use, light/moderate or heavy cigarette use, and smokeless tobacco use. USCG personnel who reported first using alcohol at age 17 or younger had a higher prevalence rate of current cigarette use, light/moderate or heavy cigarette use, and smokeless tobacco use than those who reported first using alcohol at age 18 or older; those who reported they never drank alcohol had the lowest prevalence rate of these three tobacco-related outcomes.

- Both social network facilitation of cigarette use and social network facilitation of smokeless tobacco use were also among the strongest covariates for all four tobacco-related outcomes, including current cigarette use, light/moderate and heavy cigarette use, attempts to quit or reduce smoking, and smokeless tobacco use, suggesting that the behavior of one's peers may influence service members' own substance use behaviors.

Prescription Drug Use and Misuse

Among active duty USCG personnel, approximately 15% used prescription drugs in the past 12 months. The most commonly used prescription drugs were pain relievers, with approximately 13% reporting they had used prescription pain relievers in the past 12 months; almost 7% used prescription sedatives, and less than 1% used prescription stimulants or attention enhancers or anabolic steroids. In addition, less than 1% of USCG personnel were classified as engaging in prescription drug misuse.

The two strongest covariates of prescription drug use include the following:

- High anxiety was among the strongest covariates of both prescription sedative and prescription pain reliever use, with those classified as having high anxiety having a higher rate of use than those classified as having low anxiety.

- Average hours of nightly sleep was also among the strongest covariates of both prescription sedative and prescription pain reliever use, with USCG personnel who reported 4 hours or less of average nightly sleep having a higher prevalence rate of prescription sedative use compared to those who reported 5 or more hours of average nightly sleep, and those who reported 5 to 6 hours of average nightly sleep having a higher prevalence rate of prescription pain reliever use compared to those who reported 7 to 8 hours of average nightly sleep.

Overview of Stress and Psychological Health

This section presents a summary of stress and psychological health in the USCG, including overall stress, depression, posttraumatic stress (PTS), anxiety, suicidal ideation, personality traits associated with health behaviors, including high anger propensity and low resilience, and physical and sexual abuse history. Additional details on the findings of this section are presented in Chapter 5.

Stress and Psychological Health

Among active duty USCG personnel, over one third were classified as having high overall stress; approximately 12% were classified as having high anxiety, 6% as having high depression, and only 2% as having possible PTS. Only 3% of USCG personnel were classified as having high anger propensity and 4% as having low resilience; approximately 2% of active duty USCG personnel reported suicidal ideation or attempt(s) in past 12 months. The afloat community had the highest prevalence rate of high overall stress, and high anger compared to the ashore and aviation communities. The afloat community also had a higher prevalence rate of being classified as having possible PTS compared to those in an aviation setting, and the afloat and ashore communities had a higher prevalence rate of high anxiety compared to those stationed in an aviation setting.

The strongest covariates of stress and psychological health include the following:

- Depression was one of the strongest covariates for six out of the nine stress and psychological health outcomes. USCG personnel who were classified as having high depression had a lower prevalence rate of high resilience, and a higher prevalence rate of high overall stress, possible PTS, high anxiety, high anger, and suicidal ideation or attempt than those classified as having low depression.

- Anxiety was also one of the strongest covariates for six out of the nine stress and psychological health outcomes. USCG personnel who were classified as having high anxiety had a lower prevalence rate of high resilience, and a higher prevalence rate of high overall stress, high depression, possible PTS, high anger, and suicidal ideation or attempt.

- Average hours of nightly sleep was also among the strongest covariates for the stress and psychological health outcomes, including depression, PTS, anxiety, and physical abuse, with fewer reported average hours of sleep being associated with higher prevalence rates of negative psychological health outcomes. USCG personnel who reported an average of 4 hours or less of average nightly sleep had the highest prevalence rate of high depression, high anxiety, and being classified as having possible PTS; those who reported 6 or less average hours of nightly sleep had higher prevalence rates of having a history of physical abuse compared to those who reported 7 to 8 average hours of nightly sleep. These findings highlight the importance of educating personnel on healthy sleeping habits and providing

resources for those who are sleeping too much or too little to identify the root cause(s), whether psychological or physical. Lack of sleep or over-sleeping may be a symptom of underlying psychological health concerns.

- High resilience, also among the strongest covariates for the stress and psychological health outcomes, was strongly associated with risk-taking propensity, depression, anxiety, and employing positive coping strategies. Those classified as having high depression and high anxiety had lower levels of resilience, whereas those classified as having high risk-taking propensity and engaged in positive coping had higher levels of resilience.

Physical and Sexual Abuse History

Just over one tenth (12%) reported a history of physical abuse; the same percent reported a history of sexual abuse. The ashore community had a higher prevalence of having a history of physical abuse than the aviation community, and a higher prevalence rate of having a history of sexual abuse than the afloat community.

The strongest covariates of physical abuse and sexual abuse include the following:

- USCG personnel who reported a history of sexual abuse had a higher prevalence rate of having a history of physical abuse than those who did not report a history of sexual abuse. Conversely, those who reported a history of physical abuse also had a higher prevalence rate of having a history of sexual abuse than those who did not report a history of physical abuse.

- Average hours of sleep was a strong covariate of having a history of physical abuse; USCG personnel who reported 6 or less hours of average nightly sleep had higher rates of having a history of physical abuse compared to those who reported 7 to 8 average hours of nightly sleep.

- High anger propensity was also a strong covariate of having a history of physical abuse; those classified as having a high anger propensity had a higher prevalence rate of having a history of physical abuse than those who were classified as having low anger propensity.

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of having a history of physical abuse and a higher prevalence rate of having a history of sexual abuse than those who were unlikely to be classified as having PTS.

- Self-inflicted injury was also a strong covariate of having a history of sexual abuse, with those who reported a self-inflicted injury in their lifetime having a higher prevalence rate of a history of sexual abuse than those who did not report a self-inflicted injury in their lifetime.

Overview of Lesbian, Gay, and Bisexual Service Members: A First Look

This section presents a first look at the overall percentage of USCG members identifying as lesbian, gay, or bisexual (LGB) and the demographic composition of LGB service members. Results of an exploratory analysis identifying factors that were associated with sexual orientation are also presented. Additional details on the findings of this section are presented in Chapter 6.

Among active duty USCG personnel, 95.8% identified as heterosexual ('Straight'), 2.3% identified as lesbian, gay, or bisexual (LGB), 0.7% identified as "Something else," and 1.1% indicated they were "Not at all sure." Male USCG personnel were more likely than female USCG personnel to identify as heterosexual, whereas females were more likely than males to identify as gay or lesbian, or bisexual. In terms of sexual attraction, 92.5% indicated they were only attracted to the opposite sex, 1% indicated they were only attracted to the same sex, and 0.5% indicated they were mostly attracted to the same sex. Males were more likely to indicate that they were only attracted to the opposite sex than females, whereas females were more likely to indicate a same sex attraction than males. These results also indicate that sexual orientation and sexual attraction are perceived differently.

Overall, the USCG and civilian sexual orientation composition were similar. When examining results by gender, a lower percentage of female USCG members identified as heterosexual compared to civilians; the percentage of female USCG personnel who identified as gay or lesbian was higher than that of female civilians. The sexual orientation composition of males was comparable between USCG personnel and civilians.

Sexual orientation was a significant covariate of 6 of 21 health related behaviors examined:

- USCG personnel who identified as LGB had a higher prevalence rate of heavy alcohol use, serious consequences as a result of drinking, productivity loss as a result of drinking, prescription drug misuse, suicidal ideation or attempt, and a history of sexual abuse than those who identified as heterosexual.

Overview of Service Commitment

This section presents a summary of service commitment in the USCG, including an assessment of service members' level of commitment and factors related to their commitment.

Just over one quarter of USCG personnel were classified as having high service commitment; over 60% had moderate service commitment. Those stationed in an aviation setting had the highest prevalence rate of high service commitment compared to those stationed ashore or afloat.

The strongest covariates of service commitment include the following:

- Age was associated with high service commitment, with personnel between 46 and 64 years old having the highest prevalence rate of high service commitment compared to those 45 years old or younger; personnel between 26 and 45 years old also had higher prevalence rates of high service commitment compared to those who were between the ages of 18 and 25 years old.

- USCG personnel who were classified as having high depression or possible PTS had a lower prevalence rate of high service commitment than those who were classified as having low depression or unlikely to have PTS.

- Service members classified as having high resilience had a higher prevalence rate of high service commitment compared to those classified as having low or moderate resilience.

Additional details on the findings of this section are presented in Chapter 7.

Overview of Platform Differences

One of the underlying goals of this project was to identify differences and similarities between the "platforms" of the USCG, that is the ashore, afloat, and aviation communities. Significant differences by platform were identified for most of the health-related behaviors studied, though there were no differences found for obesity, vigorous physical exercise, high blood pressure, current drinking status, engaging in risk behaviors due to drinking, high resilience, high depression, and suicidal ideation or attempt.

The afloat population stood out as having the highest prevalence of many of the health-related behaviors studied compared to the ashore and aviation communities, including heavy alcohol use; hazardous or more severe alcohol use; serious consequences as a result of drinking; work-related productivity loss as a result of drinking; current cigarette use; light/moderate and heavy cigarette use; smokeless tobacco use; high overall stress; and high anger. The ashore population had the highest prevalence of one of the health-related behaviors studied, prescription pain reliever use, compared to both the afloat and aviation communities. Those stationed in an aviation setting did not have a higher prevalence rate of any of the health-related behaviors studied in this report in comparison to either the ashore or afloat communities.

Overall findings revealed that the aviation community had the lowest prevalence rates for many of the adverse physical and mental health indicators while the afloat community had the prevalence rates highest among the three groups. The aviation community had the lowest rates of many of these adverse health behaviors.

Chapter 1: Introduction to the 2013 State of the Behavioral Health of the United States Coast Guard

This 2013 State of the Behavioral Health of the United States Coast Guard (SoBH) report presents a comprehensive assessment of the state of the behavioral health of active duty members of the United States Coast Guard (USCG). The project was conducted under the advisement of the USCG by ICF International of Fairfax, Virginia. The overall purpose of the report is to highlight areas of strength in behavioral health, as well as areas in need of improvement that may warrant additional attention in the USCG. The data presented in the report are derived from the 2011 Health Related Behaviors Survey of Active Duty Military Personnel (HRB), which is described in more detail in Chapter 2: Methodology. The previous iteration of the HRB conducted in 2008 was the first time active duty USCG personnel were included in the HRB survey; they were again included in 2011. An overview of the HRB survey instrument, the content highlighted in the report, and the structure of the report are described in this chapter.

The USCG's Health, Safety & Work-Life Directorate (CG-11) is responsible for the overarching medical stability, diagnosis, treatment, and health care direction of the active duty work force. The findings presented in the SoBH report provide an opportunity for the USCG to establish baseline data, goals, and direction for the next 3 to 5 years. Developing standards in health care and safety for the active duty military force can be challenging due to the divergent roles and responsibilities of each of the Armed Services. The USCG has adopted Healthy People 2020 as its framework for the health goals of USCG personnel as a whole. These overarching goals are to:

- "Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death;
- Achieve health equity, eliminate disparities, and improve the health of all groups;
- Create social and physical environments that promote good health for all; and
- Promote quality of life, healthy development, and healthy behaviors across all life (career) stages."[2]

The Healthy People 2020 goals are in direct alignment with the USCG's Health, Safety & Work-Life Directorate. Utilizing data from the 2011 HRB, the 2013 USCG SoBH report presents data on USCG members' physical health (e.g., weight, exercise), substance use and abuse (i.e., alcohol, tobacco, and prescription drugs), stress and psychological health (e.g., posttraumatic stress symptoms, resilience, sexual abuse), and military service commitment. In addition, for the first time,

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[2] Department of Health and Human Services. (2010). *Healthy People 2020*. Retrieved May 2012, from http://healthypeople.gov.

the 2011 HRB survey captured data on lesbian, gay, and bisexual USCG members' health behaviors. When possible, we compare the estimates from the HRB to Healthy People 2020 objectives.

The recommendations presented in this report are from the Health, Safety & Work-Life Directorate. CG-11 has reviewed the data and the analyses and has based its recommendations on the current state of the science in regards to population health medicine in general, and military medicine in particular, as it relates to the USCG.

1.1   Overview of the Health Related Behaviors (HRB) Survey

The Health Related Behaviors (HRB) survey is a comprehensive instrument that anonymously gathers data from a representative sample of active duty members on a wide array of important behavioral health topics affecting the well-being of the U.S. military. The data collected via this survey over the past 30 years have been used by military leadership at all levels to inform important policy and programmatic changes; and thus, the HRB has had a substantial impact in the military health field and in the welfare of service members.

The 2011 HRB is the 11th iteration of the survey, which has been conducted approximately every three years since 1980. The survey was originally part of a Department of Defense (DoD) initiative to improve substance abuse programs and policies in the military by quantifying the extent of alcohol use among service members following the Vietnam War. Over time, survey modifications have expanded the scope of the study from substance abuse to an analysis of broader health behaviors among service members, such as nutrition and fitness, prescription drug misuse, stress and psychological health concerns, and commitment to the military. In 2011, the Don't Ask, Don't Tell policy, which barred openly gay, lesbian, or bisexual service members from service, was repealed. As such, the 2011 HRB was the first military sponsored survey to ask USCG members about their sexual orientation in an effort to understand the needs of this group of service members and potential areas for additional support.

The 2011 HRB incorporated the most extensive changes to the survey since its inception in 1980. The research team examined every aspect of the survey design in an effort to update and improve the measurement of health behaviors and to bring the survey in line with current, state-of-the-art methods in survey research. The major changes to the 2011 HRB include the following:

- Survey Mode: The 2011 iteration of the survey was the first administration through a web-based format (versus a paper-based, group-administered, in-person format), which reduced burden on base-level unit leadership and survey respondents. The mode change to a web-based survey reduced costs and expanded the geographic reach of the survey, as the sample was not limited to military members located at a specific set of bases or geographic areas.

- Sampling: The sample design of the survey was changed to incorporate a stratified random sample of all installations.

- Measurement: Survey items were revised to improve measurement and clarity, and substance use measures were aligned with current national civilian health surveys (specifically, the National Health Interview Survey (NHIS) conducted by the Centers for Disease Control and Prevention). The HRB survey also included a number of emerging health areas, such as the culture of substance use in the military, personality characteristics associated with health behaviors (e.g., resilience, anger), and self-inflicted injury.

As a result of the extensive changes to the current version of the survey, trending comparisons in health behaviors of USCG personnel to the previous iteration of the survey are not included in this report. The changes described above in survey administration mode, sampling design, and screening items for the substance use and other measures preclude a direct comparison to results from the previous administration of the survey.[3] However, many of the modifications to the 2011 HRB on select health topics allow for direct comparison to results of national health surveys (e.g., NHIS). Additionally, the results obtained from the 2011 HRB will serve as the baseline and establish a trending benchmark for future online administrations of the survey.

1.2   Behavioral Health Areas Highlighted in the Report

As mentioned, the 2011 HRB expands and improves on measurement of emerging health areas based on previous iterations of the survey. In particular, the current survey methodology focuses on improvements in two main areas: the addition of new items that focus on health topics of relevance to the current active duty military, and improvement of item clarity and measurement.

Among the new items included in the 2011 HRB survey and presented in the current report are the following:

- Smoking reduction attempts;
- Culture of substance use (i.e., perceptions of acceptability and pressure to use alcohol, tobacco, and prescription drugs);
- Anger propensity;
- Resilience;
- Positive affect;
- Self-inflicted injury; and

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[3] To conduct an analysis of trends over time, an adjustment would need to be made to the previous years' data to allow for comparison, though based on the new mode of data collection. This was not done for this report.

- Sexual identity and sexual attraction.

Among the items altered to improve measurement are the following:

- Marital status and partner cohabitation;

- Alcohol use;

- Smokeless tobacco use;

- Prescription drug misuse;

- Stress (overall and military-related);

- Depressive symptoms;

- Suicide ideation and attempts;

- Posttraumatic stress (PTS) symptoms;

- Anxiety symptoms;

- History and perpetrator of physical and sexual abuse; and

- Level of service commitment.

In addition, one of the underlying goals of this project was to investigate whether or not differences exist among the three "platforms" of the USCG, that is the ashore, afloat, and aviation communities. While there is some speculation that there are differences in behavioral health among the platforms, little research has investigated these differences. In each chapter, we identify any observed differences or similarities among the platforms in the physical and behavioral health measures presented in this report.

1.3   Organization of the State of Behavioral Health Report

This report is organized into eight chapters and two appendices; chapters include the introduction, methodology, behavioral, physical, and psychological health content areas (five chapters), and conclusions. Each of the five substantive chapters presents a brief overview of the chapter, key measure definitions by content area under investigation, major findings, including graphical figures to highlight key findings and tables presenting analytic results, and an interpretation of findings and recommendations. Specifically, the organization of the report is as follows:

- **Chapter 2: Methodology** includes a description of the population and sampling frames for the USCG, questionnaire development, survey administration, characteristics of survey respondents, weighting procedures, analytic approach, key definitions and measures, and an explanation of variability and suppression of estimates.

- **Chapter 3: Physical Health** presents findings on USCG members' health, including obesity, vigorous physical exercise, high blood pressure, and high cholesterol.

- **Chapter 4: Substance Use** is delineated into three subsections, including alcohol use and abuse, tobacco use, and prescription drug use and misuse:

    - **4.1: Alcohol Use and Abuse**, including profiles of current drinkers, heavy alcohol use, hazardous or more severe alcohol use, serious consequences due to alcohol use, and work-related productivity loss due to alcohol use.
    - **4.2: Tobacco Use**, including current cigarette use, cigarette smoking intensity, attempts to quit or reduce smoking, and smokeless tobacco use.
    - **4.3: Prescription Drug Use**, including overall prescription drug use, prescription sedative use, prescription pain reliever use, and prescription drug misuse.

- **Chapter 5: Stress and Psychological Health**[4] presents findings on resilience, overall stress, depression, posttraumatic stress, anxiety, anger, suicidal ideation or attempt, history of physical abuse, and history of sexual abuse.

- **Chapter 6: Lesbian, Gay, and Bisexual Service Members: A First Look** presents findings on differences in outcomes by sexual orientation, presenting characteristics and health indicators related to sexual orientation.

- **Chapter 7: Service Commitment** presents USCG members' level of commitment to the military and indicators associated with high service commitment.

- **Chapter 8: Conclusions and Next Steps** presents an overview of the main conclusions and a brief assessment of the overall state of the behavioral health of the USCG and summarizes general recommendations to guide actionable next steps in supporting service members and their families.

There are also three appendices in the report:

- Appendix A: Key Definitions and Measures provides a description of how variables and values were recoded, transformed, and combined for analysis and report presentation, including the calculation of scales and composite measures.

- Appendix B: Web Survey Consent Page and Privacy Statement presents the landing page of the web survey and the survey consent language as it was presented to respondents.

- Appendix C: 2011 Health Related Behaviors Survey of Active Duty Military Personnel Web-based Questionnaire presents the online survey questionnaire and includes programmer instructions for online presentation, an indication of the questions that were presented on the

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[4] Psychological health measures reflect self-reported symptoms but do not represent clinical diagnoses.

same screen, and the words that were presented with special formatting such as colored text, underlining, or all capital letters. The questionnaire also includes the survey skip logic and the respondent base that was asked each question.

The findings presented in the SoBH report will be critical for: (a) military leadership to assess the current state of readiness and to establish future policies related to personnel health; (b) health care providers to develop appropriate prevention and treatment programs for current behavioral health concerns; and (c) the research community and greater public to understand and respond to the current needs of service members. The findings presented in this report can provide a useful framework for understanding the health and mission readiness of active duty USCG personnel in regards to both long-standing and emerging behavioral health concerns to best inform policies and programs for military members and their families.

Chapter 2: Methodology

This chapter presents the methodology used to conduct the 2011 Health Related Behaviors (HRB) Survey of Active Duty Military Personnel, the survey on which the 2013 State of the Behavioral Health of the United States Coast Guard Report is based (SoBH). The 2011 HRB included the most extensive changes in the survey since its inception by the Department of Defense in 1980. The USCG was included in the study population for the first time in 2008. In setting out to conduct the 2011 HRB, the research team reviewed all aspects of study design and implementation with an eye toward updating and improving survey implementation, measurement, and data quality. Though many items used in the 2011 HRB were similar to those used in the 2008 HRB, most were changed to improve measurement, to transition the survey to a web-based data collection, and to bring the survey in line with current civilian health research and measurement standards and current best practices in the field of survey research. Although the target population and the topics addressed in the 2011 HRB were similar to those that have been historically measured with the HRB survey, the methodology used to conduct the 2011 HRB differed substantially from past HRB surveys, including the following key differences:

- The sample design was revised to incorporate a stratified random sample of members assigned to all USCG installations;

- The questionnaire was revised (item by item) and shortened. Item skip logic was implemented to reduce respondent burden; and

- The mode of data collection changed from an in-person, paper-pencil group administration to a web-based, individual self-administered survey.

This chapter presents a detailed description of the methodology employed to conduct the 2011 HRB, highlighting the extensive changes made from the methodology that was previously employed to conduct the HRB surveys.

2.1 Population and Sample

The research objective of the SoBH Report is to assess the state of the physical and psychological health (i.e., behavioral health) of the active duty United States Coast Guard (USCG) military population. The target population for the 2011 HRB included all members of the Army, Navy, Marine Corps, Air Force and Coast Guard who were non-deployed and on active duty at the time of data collection. This report focuses only on the USCG sample. The sampling plan for the HRB surveys conducted in the past was designed to facilitate onsite data collection and employed a

clustered sample design. Respondents from the original sample who were unable to or did not attend the group survey administration sessions were replaced with respondents who were selected based on convenience. Use of the online data collection modality eliminated the need to consider installation location in the sampling design, as there was no need for geographically clustered respondents. This eliminated the need for the replacement of respondents unable to attend a survey session, as respondents were able to complete the survey at their convenience with the online administration.

2.1.1 *USCG Target Population and Sample*

The sampling plan used to select the USCG sample 2013 SoBH was designed to allow for the collection of data representative of the USCG. In this section, we present an overview of the sampling plan.

The target population for the HRB consisted of Active Duty (AD) members of the Army, Navy, Marine Corps, Air Force, and Coast Guard. National Guard and Reserve members in Active Duty programs were not included in the population of interest. Those who were deployed at the time of the sample selection were excluded from the population. Population members were not excluded from the sample if they did not have a valid email address or a valid physical address.

A Personnel Allowance List file containing a census of all USCG AD members was obtained that was current as of 15 June, 2011. This formed the overall USCG AD population. This larger population was subdivided into two separate populations, one for a site-centered, clustered sample and one for a distributed, unclustered sample. The survey was administered to USCG AD members both onsite, in a paper-pencil group administration setting similar to the prior HRB surveys, and online, comparable to the HRB data collected for the DoD services. This site-focused, clustered sample was designed to allow for a mode test to assess the transition to an online mode of administration. This report only presents the data collected online from both the site-focused and the distributed samples. The mode test is not included in this report.

The site-focused population involved a random selection of 10 installations (based on first 3-digit zip code proximity) with a probability of selection proportional to the size of installations. The installations were selected from a pool of all installations that had at least 300 USCG members. All members of this population were included in the sample (census of the 10 sites) and then randomly assigned to mode of completion, with exactly half assigned to an onsite survey administration and the remaining half assigned to an online survey administration. This census of 10 installations had 11,405 members and formed the Site-focused Population (SFP), with 5,702 allocated to the web-based survey administration.

The second population consisted of all other USCG members who were not part of the 10 chosen installations (total N=28,219). These members were geographically distributed throughout the U.S., forming the Distributed Population (DP). From this distributed population, 9,069 members were selected with stratified random sampling to participate in the online survey. The stratified sampling was disproportionately allocated to strata defined by work setting (aviation, afloat, ashore), gender, and pay grade. Table 2.1 displays the sample characteristics drawn from each population for the USCG.

Table 2.1 – Overall USCG Population, Sub-Populations, and Sample Types by Selected Characteristics					
	Total USCG Population	Distributed Population	Distributed Sample	Site-focused Population	Site-focused Sample
Work Setting					
Ashore	26,931	19,059	4,261	7,872	3,935
Afloat	8,735	6,236	3,592	2,499	1,249
Aviation	3,958	2,924	1,216	1,034	518
Gender					
Male	34,270	24,619	8,062	9,651	4,832
Female	5,354	3,600	1,007	1,754	870
Pay Grade					
E1-E4	12,862	9,750	5,095	3,112	1,588
E5-E6	14,825	11,012	2,678	3,813	1,888
E7-E9	4,371	3,010	415	1,361	681
W1-W5	1,505	1,011	166	494	229
O1-O3	3,585	2,298	515	1,287	658
O4 and higher	2,476	1,138	200	1,338	658
Total	39,624	28,219	9,069	11,405	5,702

2.2 Questionnaire Development

The 2011 HRB questionnaire was designed to reduce respondent burden and to be optimized for a web-based data collection methodology. The survey covered similar topics as those addressed in the previous HRB surveys including substance use, stress and psychological health, combat exposure and deployment, weight management and fitness, and general health, and allowed for benchmarking to selected *Healthy People* objectives. Subject matter expert groups were engaged to provide feedback on the survey questions in their domain of expertise; for example, nutrition, oral hygiene, alcohol use, tobacco use, drug use, safety, sexual risk behaviors, and psychological health, among others. Many of these topics were addressed more efficiently than in previous iterations of the survey, with fewer questions; other topics were judiciously expanded. In addition, a number of new topics were addressed such as frequency of engaging in strength training activities, resilience, anger, motivation

to use prescription drugs, the timing of prescriptions with respect to deployment, vitamin and supplement use, and selected health-related issues concerning children living with AD members. These changes are discussed in more detail in the sections that follow. A copy of the web-based questionnaire is included in Appendix C; the questionnaire presents the skip logic as well as the tailored display of items based on responses to previous questions.

2.2.1 *Review and Revision of Items*

In collaboration with the DoD, USCG, and a number of subject matter experts (SMEs) throughout DoD and across the five services, the questionnaire was thoroughly reviewed and underwent major reconstruction. The goals of the review were as follows:

- To shorten the survey instrument to minimize respondent burden;

- To add skip pattern logic to aid in the goal of shortening the questionnaire;

- To eliminate any outdated measures or scales and bring questions in line with ongoing national civilian health surveys such as the Centers for Disease Control and Prevention's National Health Interview Survey;

- To assess the topics being addressed and add to or expand on existing measures of current issues of concern or interest to DoD and USCG; and

- To eliminate items that were not analyzed in the previous survey report.

To conduct the questionnaire review, the 2008 HRB questionnaire was divided into sections by topic. Suggested deletions and revisions were circulated to SMEs. Weekly teleconference and face-to-face meetings were held, addressing a different survey topic each week, to obtain and discuss SME feedback on the proposed changes. A total of 12 groups were given the opportunity to provide feedback. Questions were further refined to incorporate DoD, USCG, and SME feedback.

Analyses of prior data were conducted to identify items for potential deletion in making recommendations for review by the SMEs. Factor analysis was performed on the 2008 HRB dataset as a data reduction technique using the principal components method of extraction with Promax (non-orthogonal) factor rotation. The goal was to identify redundant items to minimize respondent burden while also maintaining the psychometric validity of a given scale. This method identified a minimum number of items that collectively accounted for the largest amount of variance regarding the construct of interest. These analyses served as the starting point for making recommendations regarding which items should be maintained in the new iteration of the survey and which items could be dropped. Additional factor analyses were performed on the 2011 HRB dataset to replicate factor loadings in a multi-factorial analysis. In the case of new measures that were added to the 2011 HRB to cover emerging topic areas or to increase the depth or breadth of the survey, factor analyses

also were used to reduce the number of items for index construction. The technique was applied to measures of work interference due to personal life demands, personality traits associated with health behaviors (i.e., positive affect, anger, resilience, risk-taking propensity), overall stress, and psychological health measures (i.e., anxiety, depression, posttraumatic stress symptoms). Additional information on the construction of the final scales and coding of individual items can be found in Appendix A: Key Definitions and Measures.

2.2.2   Online Questionnaire Development

The survey was further refined to take full advantage of the switch to the online administration modality. With the paper surveys administered onsite in the previous HRB surveys, respondents were asked all questions; those who indicated that they did not engage in a behavior, non-drinkers for example, were required to indicate that they did not drink throughout the entire alcohol section of the questionnaire. Web-based survey technology allows for the programming of skip logic to be incorporated into the questionnaire, skipping respondents over questions that are not applicable to them based on previous responses to survey questions. This skip logic design not only has the advantage of shortening the questionnaire, but also diminishes the need for data cleaning by reducing the number of inconsistent responses that can be provided.

In addition, because the survey was presented online, it was possible to require that respondents answer selected questions before advancing to the next question. Some basic demographic questions were required because they were important for weighting and assessing the representativeness of the respondent sample. In addition, some questions were required because they determined skip logic; in other words, responses to certain questions were required to determine the next question that respondents were asked. Some of these required questions collected sensitive information, such as the admission of substance use or the admission of behaviors or thoughts indicative of psychological health concerns, such as suicidal ideation. When a sensitive question was required, a 'decline to answer' response was offered if the respondent attempted to skip the question without answering. The decline to answer option was not initially presented with the response set but was offered on a second presentation of the question if a respondent attempted to skip the question on the first presentation. This allowed respondents to proceed through the survey without being forced to answer questions that they did not feel comfortable completing. A 'decline to answer' option is not necessary on a paper survey in which respondents are able to progress past any questions that they do not wish to answer.

Additional web programming was used to highlight important words by using blue text. Some responses, such as 'not familiar,' were presented with a grayed-out background, setting the response apart from the substantive responses to reduce the tendency to select an inaccurate response. All

such programming edits are summarized in the web-based version of the questionnaire presented in Appendix C.

2.2.3   *Cognitive Pretesting*

After its initial construction, the survey instrument was pretested with junior-enlisted, active duty military personnel to identify any items or survey instructions that were unclear. It is a best practice to pretest the survey instrument with groups that would be most likely to have the greatest difficulty understanding the questionnaire. Junior enlisted personnel were used as pretest participants due to their relative lack of military experience compared to more senior personnel and because they are generally known to have lower levels of education, to be younger, and to have higher levels of risk behaviors. This group typically has the greatest difficulty understanding survey questions intended for military members and thus could be expected to have the most useful feedback and suggestions to improve the survey. In April 2011, four pretest sessions were conducted separately with personnel from the Army, Marine Corps, Air Force, and Coast Guard. Twenty-two military personnel, all of junior enlisted rank (i.e., between E1 and E4 pay grades), participated in the pretest. The sessions were conducted at Fort Belvoir, VA (Army); Marine Corps Base Quantico, VA; Andrews Air Force Base, MD; and U.S. Coast Guard Yard, Baltimore, MD.

Each pretest session was conducted in either a classroom or a conference room large enough to hold all participants and members of the research team, and identical instructions were provided to participants at each session. Before beginning the survey, participants were provided a brief overview of the purpose and history of the survey and were then handed identical paper copies of the survey to complete. Participants were instructed to complete the questionnaire as they normally would in a typical survey session, completing all of the relevant survey items and answering honestly. Participants were also instructed to circle any questions or specific responses or instructions that they found unclear, confusing, or difficult to answer while taking the survey. Participants were informed that their answers would remain anonymous, and to that end, upon completion of the testing process, participants were given the option of keeping their survey or having it immediately shredded.

Once all participants had completed the questionnaire, the researchers guided a group discussion about the survey. The researchers began each discussion by first asking participants to share their comments, concerns, and criticisms about the survey in general, without focusing on specific survey items. The researchers then reviewed the survey with participants, one page at a time, asking for comments on specific survey items and sections. Participants commented that they found the survey items and instructions, including the skip instructions, generally easy to understand. Some participants commented that the survey was long and time-consuming. Participants also offered numerous comments about specific survey items, including suggestions for improving question and response option clarity, the addition of response options, the addition of clarification instructions,

improvements to question format, and improvements to question flow and order. In addition, the researchers asked respondents about their Internet access and habits to determine the ability to reach intended respondents. Upon completion of the session, respondents were provided with food and beverages in exchange for their participation in the sessions. The pretest sessions allowed for a sequential modification of the questionnaire - the questionnaire was modified slightly following the first two sessions and then pretested in two more sessions. Another series of modifications were made following the last pretest sessions.

Once the questionnaire and survey communication protocols were finalized, including informed consent and invitation and reminder text, they were reviewed and approved by three Institutional Review Boards (IRB), including ICF International's IRB, DoD's IRB, and USCG's IRB.

2.3 Survey Administration

This section summarizes the procedures that were implemented to administer the web-based survey.

2.3.1 Service Liaison Officers

The USCG identified a senior officer or point of contact to assist with and facilitate a number of data collection activities. These individuals, referred to as Service Liaison Officers (SLOs), were the main point of contact within the command structure. For the online data collection, these individuals were asked to perform three specific tasks:

- Work with information technology (IT) departments to whitelist[1] the survey's URL on their computer system;

- Obtain a letter of support from a ranking officer within their command hierarchy to encourage participation in the survey and to provide authenticity for the web-based survey; and

- Act as the primary point of contact for respondents regarding issues and questions and then refer issues to ICF for resolution as needed.

2.3.2 Invitations and Reminders

The survey communication strategy included sending email using TMA listservs with a TMA utility (.mil) email account specifically created for this project. The listserv approach did not allow for any email personalization to individuals; as such, the text of the invitation and reminder message was the same for all sampled service members. Listservs were initially set up for the DoD sample as well as for the USCG sample. Respondents who opted out of further communication contacts were removed from the listserv before sending each subsequent email.

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[1] The opposite of "blacklist," which prohibits entry into a system, a "whitelist" provides a mechanism that permits passage through a system.

All respondents received 5 communications (1 invitation and 4 reminder emails). All emails included the URL for the web-based survey, a link to letters of support, and contact information for the helpdesk. The USCG letters of support were from VADM J.P. Currier, Deputy Commandant of Mission Support at the time of the survey, and RADM Mark J. Tedesco, Director of Health, Safety, and Work-Life at the time of the survey. These letters were posted on the ALCOAST Internet alert system.

Invitations and reminders were sent on a staggered start schedule to reduce email and web-based survey server loads and because service branches provided the supporting documentation (e.g., letter of support from command, whitelisting from each component's IT department) at different times. The initial invitation emails to USCG personnel were sent on 4 October, 2011. The last reminder email was sent on 29 December, 2011. The survey was closed on 11 January, 2012.

2.3.3 Ensuring Respondent Anonymity

The survey asked a number of questions on behaviors that are typically considered private and can result in serious consequences, especially in a military population. In some cases, reporting engagement in a specific behavior would constitute admission of engaging in illegal activity (e.g., taking recreational drugs) and would be subject to the Uniform Code of Military Justice (UCMJ) discipline. It was therefore of the utmost importance that the survey be anonymous such that individuals' identifying information could not be connected to their responses. At the beginning of the survey, individuals were presented with an informed consent page that included a privacy statement. Appendix B presents the text of this page. To maintain anonymity, respondents were not issued survey logins or passwords so there was no way to know who among the sampled members had completed the survey and who had not. Sampled members were able to opt-out of receiving the additional reminders using a link that was provided in the reminder emails and at the beginning and end of the survey. All survey communications, including the letters of support from senior leadership, the initial invitations, and all reminders, indicated that the survey was anonymous. In addition, most items that asked for demographics that may have provided information to identify individuals were asked with categorical response options to maintain anonymity.

2.3.4 Survey Support and Helpdesk

Technical support to address respondent concerns was provided by ICF's Survey Operations Center helpdesk. The helpdesk could be reached by email (2011HRBSurvey@icfi.com) or toll-free telephone number. The helpdesk responded to email and phone calls between 8 AM and 6 PM Eastern Standard/Daylight Time (EST); calls were automatically routed to voicemail outside of these hours. ICF responded to most messages or contacts within 1 to 2 business days. Respondents who wanted to verify the legitimacy or authority of the survey request or who had other questions

that required a military source were forwarded to the USCG's Service Liaison Officer assigned to support this survey.

2.4 Respondents

This section summarizes the number and nature of respondents who completed some or all of the web-based survey.

2.4.1 *Sample Losses*

Sample members were lost from the sample for three main reasons: (1) an inability to locate the sample member, (2) self-reported ineligibility for the survey, and (3) non-participation in the survey or incomplete response to the survey.

Only those USCG sample members who had a USCG email address were invited to participate in the web-based questionnaire; no postcard invitations were sent to those who had no email address. As a result, 4.0% of the drawn samples for USCG (i.e., 592 of the 14,771 sample members) were lost because the sample member could not be located due to the lack of an initial email address, resulting in a located sample of 14,179 USCG members.

An ineligibility proportion was determined for those in the sample who were selected and sent an invitation. Ineligibility was determined by survey responses; those who were not AD members as determined on Question 1-A were considered ineligible (see Appendix C). The eligible sample represents the total sample after removing the expected proportion of ineligible respondents.

Respondents who submit an incomplete survey are typically excluded from the analytic data file based on a pre-determined definition of what is considered a usable questionnaire. To be considered a usable questionnaire, a respondent had to complete the key demographic questions necessary for weighting (service, gender, pay grade, platform, and AD status) and at least one question within the alcohol section of the survey.

2.4.2 *Response Rates*

Usable response rates were calculated based on the number of respondents who had a usable questionnaire divided by the eligible sample size standard. The response rate calculation, consistent with the American Association for Public Opinion Research (AAPOR) standards, is presented in Table 2.2, below.[2]

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[2] American Association for Public Opinion Research. (Date unknown). *Response Rate - An Overview*. Retrieved June 19, 2012, from http://www.aapor.org/Response_Rates_An_Overview1.htm.

Table 2.2 – Determination of Usable Response Rate by Service					
	Sample N	Proportion Ineligible	Eligible Sample	Usable Respondents	Usable Response Rate
USCG	14,771	0.80%	14,653	5,461	37.27%

In the USCG sample (n = 14,771), 0.80% were classified as ineligible, resulting in an eligible sample of 14,653. Of the eligible sample, 5,461 were usable respondents, resulting in an overall usable response rate of 37.27%.

The online response rate obtained for the HRB was similar to other comparable military surveys conducted online, such as the "Don't Ask, Don't Tell" (DADT) survey conducted in 2010 on behalf of DoD, which had a response rate of 28% for AD members.[3] In addition, the DoD June 2010 *Status of Forces Survey of Active Duty Members* (SOFS-A) obtained a 25% response rate.[4] On the whole, response rates for all modes of survey administration, including in-person and telephone, have been declining in recent years, and web-based surveys tend to have lower response rates than other survey administration modes.[5] Research by Groves (2006) and Keeter, Kennedy, Dimock, Best, and Craighill (2006) has shown that nonresponse rates are not necessarily indicative of validity or bias in a survey, as long as nonresponse is random and reasons for non-participation are unrelated to the key survey variables. Under such conditions, nonresponse does not jeopardize estimates.

In comparing response rates by key population subgroups, large differences may suggest the potential for nonresponse bias. To the extent that lower responding groups provide different answers to survey questions than higher responding groups, large differences in response rates across subgroups may suggest nonresponse bias. Table 2.3 presents the response rates for each stratum, which were defined by service, gender, pay grade, and work setting. Consistent with other web-based surveys of service members, junior enlisted personnel, particularly males, had the lowest response rates.[6] As discussed in more detail in the weighting section below, post-stratification weights adjusted for nonresponse were computed by strata to adjust the respondent data file to be representative of the AD military population.

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[3] Westat. (2010, November). Support to the DoD Comprehensive Review Working Group Analyzing the Impact of Repealing "Don't Ask, Don't Tell" - Volume 1: Findings From the Surveys. Rockville, MD: Author.
[4] Defense Manpower Data Center (DMDC) June 2010 S*tatus of Forces Survey of Active Duty Military Personnel* results briefing: http://www.phma.com/zpdsxxiii/presentations/DMDC.pdf
[5] Manfreda, K. L., Bosnjak, M., Berzelak, J., Haas, I., & Vehovar, V. (2008). Web surveys versus other survey modes: A meta-analysis comparing response rates. *International Journal of Market Research, 50, 79-104*; and Shih, T., & Fan, X. (2008). Comparing response rates from web and mail surveys: A meta-analysis. *Field Methods, 20,* 249-271.
[6] Defense Manpower Data Center (DMDC). *2010 Workplace and Gender Relations Survey of Active Duty Members*. Retrieved from http://www.dtic.mil/dtic/tr/fulltext/u2/a540906.pdf

Table 2.3 – Determination of Usable Response Rate in the USCG, by Strata				
Strata	**Sample N**	**Eligible Sample**	**Usable Respondents**	**Usable Response Rate**
Ashore, E1-E4, Male	2,341	2,322	779	33.54%
Ashore, E5-E6, Male	2,449	2,429	1,146	47.17%
Ashore, E7-E9, Male	705	699	462	66.06%
Ashore WO1-WO5, Male	304	302	194	64.33%
Ashore, O1-O3, Male	556	552	273	49.50%
Ashore, O4 and above, Male	642	637	348	54.64%
Ashore, E1-E4, Female	505	501	217	43.32%
Ashore, E5-E6, Female	323	320	217	67.72%
Ashore, E7-E9, Female	75	74	51	68.55%
Ashore WO1-WO5, Female	29	29	21	73.00%
Ashore, O1-O3, Female	163	162	82	50.71%
Ashore, O4 and above, Female	104	103	63	61.07%
Afloat, E1-E4, Male	2,830	2,807	365	13.00%
Afloat, E5-E6, Male	1,038	1,030	365	35.45%
Afloat, E7-E9, Male	198	196	113	57.53%
Afloat WO1-WO5, Male	43	43	28	65.64%
Afloat, O1-O3, Male	187	186	72	38.81%
Afloat, O4 and above, Male	64	63	23	36.23%
Afloat, E1-E4, Female	270	268	64	23.89%
Afloat, E5-E9, Female	143	142	50	35.25%
Afloat, Officers, Female	68	67	25	37.06%
Aviation, E1-E4, Male	634	629	133	21.15%
Aviation, E5-E6, Male	546	542	176	32.49%
Aviation, E7-E9, Male	103	102	43	42.08%
Aviation WO1-WO5, Male	16	16	6	37.80%
Aviation, O1-O3, Male	193	191	70	36.56%
Aviation, O4 and above, Male	45	45	34	76.16%
Aviation, E1-E4, Female	103	102	21	20.55%
Aviation, E5-E9, Female	82	81	14	17.21%
Aviation, Officers, Female	12	12	6	50.40%
Total	14,771	14,653	5,461	37.27%

In addition, a sample should be sufficiently large and diverse and with a minimum of nonresponse bias (or with sufficient off-setting biases) to obtain accurate point estimates. Though we do not have a direct measure of nonresponse bias, the sample of usable surveys was large and diverse across survey strata, as indicated by the demographic results (see Table 2.4).

Table 2.4 – Usable Respondents by Service Group for Selected Service Member Characteristics			
	USCG Site-focused	**USCG Distributed**	**USCG Total**
Work Setting			
Ashore	1,982	1,871	3,853
Afloat	408	697	1,105
Aviation	182	321	503
Gender			
Male	2,133	2,497	27,446
Female	439	392	12,431
Pay Grade			
E1 - E4	481	1,098	12,453
E5 - E6	853	1,111	11,557
E7 - E9	421	252	6,186
W1 - W5	148	102	1,678
O1 - O3	304	219	4,338
O4 and higher	365	107	3,665
Total	**2,572**	**2,889**	**39,877**

2.5 Weighting the 2011 HRB Active Duty Sample

This section describes the weights that were calculated for the USCG data. Since there were two populations for USCG (i.e., Site-focused and Distributed), two separate weighting procedures were developed. For the Site-focused sample, members were randomly divided between onsite and online modes of administration. Since, for the purposes of this report, results only include data from the online mode of administration, the online data were weighted to the proportions of the census of the 10 sites within the strata of work setting (aviation, afloat, ashore), gender, and pay grade using a post-stratification weight only.

For the Distributed sample, drawn from the population that excluded the 10 sites, a base weight was first computed using the proportions within strata of the distributed population and adjusted for nonresponse. This base weight was created to compensate for disproportionate stratification and unequal selection probabilities from the active duty population. Within the USCG, the sub-strata were defined by gender, rank group, and platform. For a case i in sub-stratum j of service k, the design weight was computed as:

$$w1_{ijk} = \frac{N_{jk}}{n_{jk}} \qquad [1]$$

A second weight adjusting for differential nonresponse was further computed. Within each service, the sub-strata were again defined by gender and rank group. For a case i in stratum j of service k, the weight that adjusted for nonresponse was computed as:

$$w2_{ijk} = \frac{n_{jk}}{r_{jk}} \qquad [2]$$

where n_{jk} were the number of sampled active duty members and r_{jk} were the number of completed cases in stratum j of service k.

The combined weight adjusted for both unequal selection probabilities and differential nonresponses and was calculated by the following:

$$w3_{ijk} = \frac{N_{jk}}{r_{jk}} \qquad [3]$$

The weights, computed for each population separately, were used in combination to adjust the sample to be representative of the total USCG population (from both populations). Due to low numbers in specific strata in the population, in the samples pulled, and in the usable respondent sample, a number of strata were collapsed for weighting of both the Site-focused and Distributed samples. Specifically, for aviation and afloat work settings only, 2 strata–females E5-E6 and E7-E9– were combined into one stratum (female E5-E9), and 3 strata–female W1-W5, female O1-O3, and female O4 and above– were combined into a single female officer stratum, since warrant officers are commissioned officers in the USCG. This reduced the total cells used from 36 (3 work settings X 2 gender categories X 6 pay grade categories) to 30 (for ashore, 6 pay grade categories each for males and females; for afloat and aviation work settings, 6 pay grade categories for males but only 3 pay grade categories for females – E1-E4, E5-E9, Officer). The combined sample size (including both the Site-focused and Distributed samples) was used to compute sample weights as a proportion of the population.

Table 2.5 summarizes the effective sample sizes for the USCG based on weight variances for both 2011 and 2008. It also includes a power analysis of the effective sample sizes.

Table 2.5 – Summary of Weighting Efficiency and Consequent Confidence Interval				
Survey	Total N of Usable Surveys	Weighting Efficiency - based on the variance of the weights	Effective N - Sample Size After Weighting	95% Confidence Interval[1]
2011 HRB	5,461	84.3%	4,605	+/-1.36%
2008 HRB	3,856	68.0%	2,621	+/-1.85%

[1] 95% of the time the population value will fall within this range of the sample estimate with a sample this size.

These weights were used in nearly all of the analyses presented in this report. Weights were not used for the logistic regression analyses in which the variables used to construct the weights (i.e., work setting, pay grade and gender) were entered as covariates in the model. All other analyses were weighted.

2.6 Analytic Approach

After the close of data collection, the survey data were cleaned of test and non-usable cases and processed in preparation for analysis. This processing included relabeling of variables and response options for easier analysis. The focus of the analyses presented in this report is to provide an assessment of the state of the behavioral health of AD USCG members. These analyses also provide information to help evaluate and guide policy and program decisions, including identifying areas of strength and optimal health as well as areas of concern that adversely affect personnel readiness.

This report is intended to serve as a baseline for future iterations of the USCG SoBH. Due to the extensive changes in the survey, including item wording, scale definitions and construction, sampling, weighting, data editing, and analysis, the new methodology employed in the 2011 HRB precludes direct comparisons of the survey results to the last SoBH report.

Most analyses presented in this report are two-way crosstabulations and logistic regression analyses. Chi-square tests of statistical significance were used for categorical variables. In assessing statistical differences between estimates, Bonferroni adjustments were applied to p-values to minimize Type I error (i.e., false positives) as a result of performing multiple pairwise comparisons. Bonferroni is a conservative statistical adjustment to the alpha level based on the number of statistical comparisons performed.

Many of the analytic crosstabulations are presented by pay grade. In 2008, pay grade columns were presented as E1-E3, E4-E6, E7-E9, W1-W5, O1-O3, and O4-O10. The 2011 pay grade survey item was revised to group E1 to E4 and E5 to E6. This change was made in response to requests from the services and to match other military surveys, enhancing comparability with other military data sources. As such, the 2013 report presents the pay grade columns as E1-E4, E5-E6, E7-E9, W1-W5, O1-O3, and O4-O10, with officer trainees included in the E5-E6 category.

2.7 Key Definitions and Measures

Some of the questions asked on the survey were meant to be presented individually. With such items, the presentation of responses varied by survey item. In some cases, all response options are presented in the analyses, whereas for other analyses, only the most at risk categories are presented. For some measures, the responses were dichotomized to indicate a "Yes/No" response pattern or

the top two response options were combined to present those who strongly endorsed or frequently engaged in an activity.

Some survey questions, on the other hand, measured only one aspect of a construct and were meant to be combined into a scale. For established scales, such as the World Health Organization's Alcohol Use Disorders Identification Test (AUDIT) or the Body Mass Index (BMI) measure, responses to the individual items were combined in accordance with standard scoring instructions for the scales. For other scales, results are reported by dichotomizing responses (e.g., average top 2 box score). This uses an *a priori* determination of what constitutes a "High" value. The determination of a cutoff is independent of the distribution of responses for the particular sample. As an example, suppose there are 2 items that compose a scale, each with 5 response categories. A top 2 box on a 5 category scale are the values 4 and 5. Since there are 2 items we would double 4 (the minimum top 2 box score) to give us a cut-off value of 8. The value of 8 then becomes the *a priori* cut-off – respondents who score an 8, 9, or 10 would be labeled 'High'. Note that to score an '8' a person could have scores of 3 and 5 on the two items or scores of 4 and 4. It is the sum of the minimum values that determines the cutoff. In this format, percentages are reported and can be presented easily. This format also allows comparisons across groups (e.g., pay grades) and allows for an easy comparison to other samples with a different distribution of scores. Explanations of the recoding and transformations conducted on each of the individual measures are presented in Appendix A.

2.8 Variability and Suppression of Estimates

Most analytic tables present two statistics in each row, the estimate and the standard error, or the odds ratio and corresponding confidence interval. The estimate typically represents the percentage of the population with the characteristics defined in the columns and rows of each table. The standard error is a measure of variability that is calculated when presenting survey estimates from a sample rather than from a census of all individuals in a population. The standard error can be used to calculate a confidence interval, which represents a range of values around the survey estimate and is likely to include the true population value.

In reporting survey estimates, it is common to suppress estimates that may be statistically unreliable or that may jeopardize respondent confidentiality due to low rates of event occurrence or small cell sizes.[7] Estimates considered to be unreliable were not reported in the tables. Estimates were considered unreliable if they were based on a small sample size or if they had large sampling errors. Large standard errors are often the result of small sample sizes and can also result from a great deal of variation or differences in the population on a given measure. Estimates were suppressed if the following criteria were met:

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[7] Blumberg, S. J. (2008). Cell suppression. In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods, volume 1* (p. 90). Los Angeles, CA: SAGE Publications, Inc.

- For estimates expressed as proportions, a relative standard error (RSE), the ratio of the standard error to the estimate, of the natural log of the estimate greater than 0.225;[8]

- The number of cases in the denominator of an estimate was fewer than 30; or

- The estimate was very small and rounded to 0.0%.

Suppressed estimates are indicated with a cross (†) in the tables.

Logistic regression is a form of regression used when the dependent variable is dichotomous, producing estimates referred to as odds ratios. An odds ratio is a measure of association between two variables and represents the odds that an outcome will occur given a particular experience, condition, demographic, etc. compared to a specified reference group. For example, the odds that junior enlisted service members experienced an event may be compared to senior officers, where senior officers are the reference group; an odds ratio of 2.0 would indicate that junior enlisted service members are twice as likely to have experienced an event, have a condition, etc. than senior officers. Given the cross-sectional nature of the current study, cause and effect cannot be determined. However, the odds ratio provides insight into the strength of the relationship between two variables.

Similar to the use of suppression criteria when reporting survey estimates, a logistic regression model is suppressed if it may be statistically unreliable. The regression coefficients (odds ratios) in a logistic regression model were considered unreliable if the minimum number of events of the less common outcome (e.g., heavy alcohol use was less common than no heavy alcohol use) divided by the number of predictor variables was less than 10.[9] For example, when age group was the predictor in a logistic regression, four dummy variables were typically included in the model (i.e., 18-20, 21-25, 26-35, and 36-45; the 46-65 age group was the reference group). Using the rule described above, if the number of events of the less common outcome was less than 40, the regression model would be suppressed. However, none of the logistic regression models tested for this report needed to be suppressed based on this criteria.

2.9 Study Limitations

As with all research, there are limitations to this survey that should be noted in interpreting the findings presented in this report. Firstly, the data reported were based on self-reports. In particular,

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[8] Use of the RSE is problematic with proportions because it imposes stricter suppression requirements on very small estimates than it does on very large estimates. The sample size required for small proportions to achieve a very small standard error is much larger than the sample size required for an estimate closer to 0.5. The RSE $[-\ln(p)] = SE(p)/(-p*\ln(p))]$, where p is the estimate and SE(p) is the standard error of the estimate; for proportions greater than 50%, the RSE was calculated using 1-p. This is consistent with estimate suppression of proportions in prior HRB reports.

[9] Bagley, S. C., White, H., & Golomb, B. A. (2001). Logistic regression in the medical literature: Standards for use and reporting, with particular attention to one medical domain. *Journal of Clinical Epidemiology, 54,* 979-985.

individuals in the military may be less likely to report sensitive information such as receipt of mental health counseling or engagement in illegal activities (e.g., illicit drug use) due to a strict military code of conduct. Although survey respondents were assured of their anonymity in participating in the survey, survey invitations were distributed via military email addresses. Concerns about anonymity, particularly among those taking the survey on a military computer, may have resulted in an underreporting of some sensitive or illegal behaviors. The data in this report, particularly on sensitive and illegal behaviors, should be interpreted in the context of other sources of information on military personnel, such as administrative health records, spousal and others' reports of health behaviors, and observational studies of behaviors.

Secondly, although the response rate obtained for this survey is in line with comparable web-based health surveys of military personnel, some groups had lower response rates than others, namely males in the junior enlisted pay grades. One challenge of conducting an online survey with the active duty military population is that junior enlisted personnel, and in particular male junior enlisted members, are less likely to have regular access to computers and email accounts depending on their current duty assignment or military occupational specialty, and those with access difficulties may be different from those who have easier access on key measures assessed in this survey. Although post-stratification weights were calculated by strata to ensure sample representation to the total active duty population, lower response rates for some groups and higher response rates for others may increase the likelihood of under- or over-reporting of behaviors in this survey and possibly bias the results due to an interaction between survey access and respondent characteristics. Thus, the results should be interpreted with some caution. Future surveys of this population should keep in mind that junior enlisted personnel tend to have lower response rates and incorporate a strategy for improving response rates among this group.

Finally, due to the extensive changes in survey administration mode, such as moving from a self-administered questionnaire in a group setting to an individually-administered computer-based methodology, a number of factors changed, including item wording, scale construction and measurement, data editing, sampling, weighting, and analysis. As a result, 2011 survey results cannot be directly trended to the results presented in the previous SoBH. Unless a longitudinal design is used with an exact replication of sampling, items, and methodology, it is not possible to make inferences about changes in behaviors over time without taking into account the differences in the demographic composition of the service members surveyed over time. It is recommended that current survey results be benchmarked against similar web-based surveys of AD personnel who were surveyed during the same timeframe and against civilian estimates that used the same items to assess behaviors, such as the NHIS. However, such comparisons should be interpreted cautiously given that there are likely differences in measurement error between surveys because they employ varying methodologies. The 2013 SoBH will serve as the baseline for future web-based iterations of the survey.

Chapter 3: Physical Health

This chapter presents the results of a detailed analysis of various indicators of physical health, including obesity, engagement in vigorous physical exercise, and blood pressure and cholesterol levels.[1] This chapter describes prevalence rates and investigates covariates of each measure. Tables presenting results for each outcome measure are at the end of the chapter. Figures are also presented which show prevalence rates by platform, and four variables that exhibit strong relationships with each outcome variable of interest (i.e., strong odds ratio in comparison to the reference category). The overall prevalence rate for each outcome measure is also displayed as a red horizontal line in each figure.

Overview of Findings

3.1   Obesity

One measure of weight management is the Body Mass Index (BMI), an indirect measure of body fat, to detect possible weight problems. BMI was calculated from self-reported height and weight, and individuals were categorized into four possible outcomes based on their BMI: 1) underweight, 2) healthy weight, 3) overweight, and 4) obese. Categories were based on the criteria established by the Centers for Disease Control and Prevention (CDC) and by age; in accordance with the CDC, the criteria used for categorizing BMI for service members younger than 20 years old differed from the criteria used for adults age 20 and older. For adults age 20 and older, a BMI of less than 18.5 was considered underweight, a value of 18.5 to less than 25.0 was considered healthy weight, a value of 25.0 to less than 30.0 was considered overweight, and 30.0 or greater was considered obese.[2] BMI does not distinguish between muscle mass and body fat in a person's body; as such, there may be some misclassification of muscular individuals.

Among active duty USCG personnel, 11% were classified as obese (see Table 3.2). Figure 3.A presents the relationship between platform and being obese as well as four variables that have strong associations with being obese in the USCG: gender, pay grade, age group, and average hours of nightly sleep.

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[1] Definitions for all of the measures reported in this section are also explained in Appendix A: Key Definitions and Measures.
[2] The criteria used to classify BMI for individuals under 20 years old are available in Appendix A: Key Definitions and Measures.

Figure 3.A: Indicators Associated with Being Obese[3]
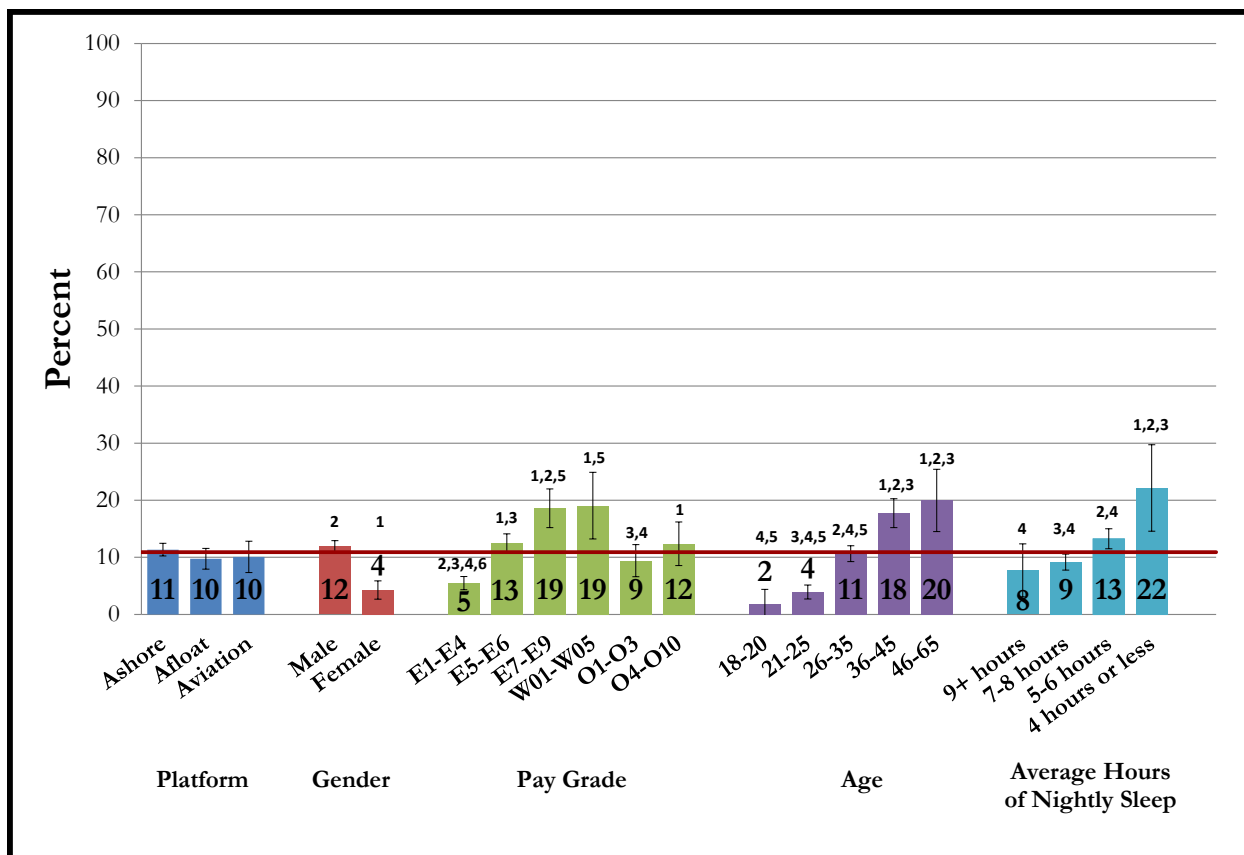
- There were no significant differences in being classified as obese by platform.

- Male USCG personnel had a higher prevalence rate of obesity than female USCG personnel (12% vs. 4%).

- Pay grade was associated with being classified as obese, with junior enlisted members having the lowest prevalence rate of being obese (5% vs. 12%-19%). Junior officers also had a relatively low prevalence rate of obesity (9%).

- Consistent with the findings for pay grade, age group was also associated with obesity, with those between 18 and 25 years old (i.e., 18-20, 21-25) having lower prevalence rates of being

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[3] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group. For example, consider the gender bars in this figure:

[1] Indicates estimate is significantly different from the estimate in bar #1 (Male) at the 95% confidence level after Bonferroni adjustment.

[2] Indicates estimate is significantly different from the estimate in bar #2 (Female) at the 95% confidence level after Bonferroni adjustment.

obese than those between 26 and 65 years old (i.e., 26-35, 36-45, 46-65) (2%-4% vs. 11%-20%).

- USCG personnel who reported the least average hours of nightly sleep, 4 hours or less, had the highest prevalence rate of obesity compared to those who reported 5 to 6, 7 to 8, or 9 or more average hours of nightly sleep (22% vs. 8%-13%).

3.2 Vigorous Physical Exercise

Respondents were asked to report how frequently they engaged in vigorous physical activity in the last 30 days. Vigorous physical activity was defined as exertion high enough to make it difficult to carry on a conversation during the activity. Response options were recoded into a dichotomous variable to represent whether or not the respondent engaged in vigorous physical activity in the last 30 days. Respondents reporting 'Less than 1 day a week' up to 'About every day' were classified as having engaged in vigorous physical activity while those reporting 'Not at all in the past 30 days' were classified as not having engaged in vigorous physical activity.

Approximately 92% of active duty USCG personnel engaged in vigorous physical exercise in the past 30 days (see Table 3.3). Figure 3.B presents the relationship between platform and vigorous physical exercise, along with four variables strongly associated with engaging in vigorous physical exercise in the USCG: depression, possible posttraumatic stress (PTS), suicidal ideation since joining the military, and positive coping.

Figure 3.B: Indicators Associated with Engaging in Vigorous Physical Exercise, Past 30 Days[4]
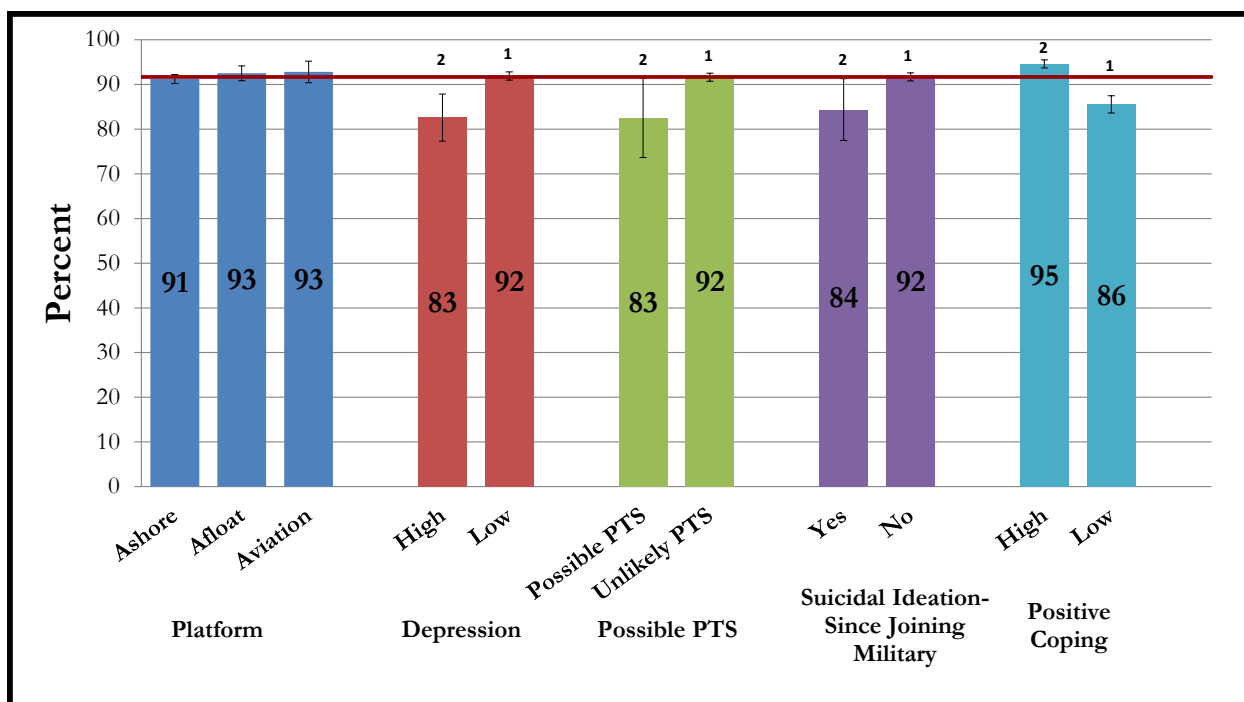
- There were no significant differences in engaging in vigorous physical exercise by platform.

- USCG personnel who were classified as having high depression had a lower prevalence rate of engaging in vigorous physical exercise than those who were classified as having low or no symptoms of depression (83% vs. 92%).

- Similar to those classified as having high depression, those who were classified as having possible PTS had a lower prevalence rate of engaging in vigorous physical exercise than those who were unlikely to be classified as having PTS (83% vs. 92%).

- USCG personnel who indicated having suicidal ideation since joining the military had a lower prevalence rate of engaging in vigorous physical exercise compared to those who did not experience suicidal ideation (84% vs. 92%).

- USCG personnel who reported high levels of positive coping had a higher prevalence rate of engaging in vigorous physical exercise compared to those who reported low levels of positive coping (95% vs. 86%).

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[4] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

3.3   High Blood Pressure

Respondents were asked whether they had been told by a doctor or other health care professional that they have high blood pressure a) within the past two years, b) more than two years ago, or c) neither. Responses were dichotomized to identify individuals who reported they had been told they have high blood pressure within the past two years compared to those who were told prior to two years ago or not at all.

About 8% of active duty USCG personnel indicated they had been told by a doctor or other health care professional that they had high blood pressure within the past 2 years (see Table 3.4). Figure 3.C presents the association between platform and high blood pressure, in addition to four variables strongly associated with having high blood pressure in the USCG: gender, age group, average hours of nightly sleep, and anger.

Figure 3.C: Indicators Associated with High Blood Pressure[5]

- There were no significant differences in high blood pressure by platform.

- Male USCG personnel had a higher prevalence rate of high blood pressure than female USCG personnel (9% vs. 2%).

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[5] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- Age group was associated with having high blood pressure, with those between 18 and 25 years old (i.e., 18-20, 21-25) having lower prevalence rates of high blood pressure than those between 26 and 65 years old (i.e., 26-35, 36-45, 46-65) (2%-5% vs. 8%-12%).

- USCG personnel who reported the least average hours of nightly sleep (i.e., 4 hours or less) had the highest prevalence rate of high blood pressure compared to those who reported 5 to 6, 7 to 8, or 9 or more average hours of nightly sleep (17% vs. 6%-9%).

- USCG personnel who were classified as having high anger reported a higher prevalence rate of high blood pressure than those who were classified as having low anger (18% vs. 7%).

3.4   High Cholesterol

Respondents were also asked whether they had been told by a doctor or other health care professional that they have high cholesterol a) within the past two years, b) more than two years ago, or c) neither. The following analyses focus on those who reported they had been told they have high cholesterol within the past two years.

Approximately 11% of active duty USCG personnel indicated they had been told by a doctor or other health care professional that they had high cholesterol within the past 2 years (see Table 3.5). Figure 3.D presents the association between platform and high cholesterol, in addition to four variables strongly associated with having high cholesterol in the USCG: gender, age group, family status, and average hours of nightly sleep.

Figure 3.D: Indicators Associated with High Cholesterol[6]
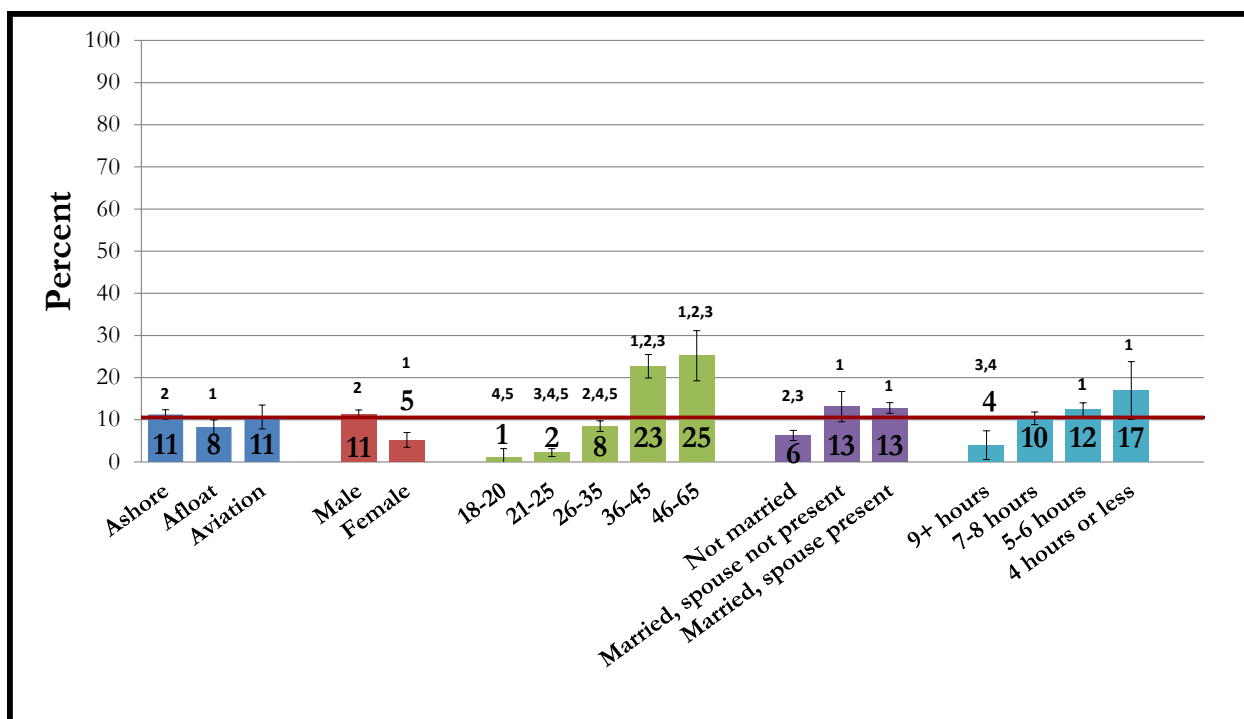
- USCG personnel who were stationed ashore had a higher prevalence rate of high cholesterol than those stationed afloat (11% vs. 8%).

- Similar to high blood pressure, male USCG personnel had a higher prevalence rate of high cholesterol than female USCG personnel (11% vs. 5%).

- Also, similar to high blood pressure, age group was associated with having high cholesterol, with those between 18 and 25 years old (i.e., 18-20, 21-25) having lower prevalence rates of high cholesterol than those between 36 and 65 years old (i.e., 36-45, 46-65) (1%-2% vs. 23%-25%).

- USCG personnel who were not married had a lower prevalence rate of high cholesterol than USCG personnel who were married, regardless of whether their spouse was present or not (6% vs. 13%).

- USCG personnel who reported 6 hours or less of average nightly sleep had higher prevalence rates of high cholesterol compared to those who reported 9 or more average hours of nightly sleep (17% and 12%, respectively, vs. 4%).

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[6] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

3.5 Status of Selected Healthy People 2020 Health Promotion Objectives

We analyzed moderate or vigorous physical activity in the past 30 days as well as obesity to assess USCG personnel's progresses towards the *Healthy People 2020 Health Promotion Objectives*, as presented in Table 3.1. Moderate or vigorous physical activity was defined as engaging in moderate physical activity (exertion that raises heart rate and breathing, but able to carry on a conversation comfortably during the activity) for at least 150 or more minutes per week or vigorous physical activity (exertion high enough to make it difficult to carry on a conversation during the activity) for at least 75 or more minutes per week. Rates of moderate or vigorous physical exercise in the USCG, at 66.8%, were much higher than the *Healthy People 2020* objective of 47.9%. A comparison with the civilian estimate reveals that rates of moderate or vigorous physical exercise in the USCG are also much higher than among civilian adults.

Obesity is based on BMI, which is calculated from self-reported height and weight and is defined as BMI of 30.0 or higher for adults 20 years old or older. The rate of obesity in the USCG, at 10.9%, was much lower than the *Healthy People 2020* objective of 30.5%. In addition, the rate of obesity in the USCG is much lower than among civilian adults.

Table 3.1 – Healthy People 2020 Health Promotion Objectives: Exercise[7]

Measure	Healthy People 2020 Objective[8]	2011 Civilian Estimate[9]	USCG Estimate
Moderate or Vigorous Physical Activity, Past 30	≥47.9%	48.8%	66.8% (0.7)
Obese (Age 20 or older)	<30.5%	33.9%	10.9% (0.5)

3.6 Interpretations and Recommendations

According to the 2011 HRB data, there were no differences in the four physical health indicators by platform, except for high cholesterol, with the ashore population having a slightly higher prevalence of high cholesterol than the afloat population. Differences in physical health indicators were clear by gender, with gender being among the strongest covariates for three out of the four physical health indicators reported. Males had higher levels of obesity, high blood pressure, and high cholesterol. Males had a slightly higher prevalence rate of vigorous physical exercise than females. Male USCG members could be considered a target population for education by the Health Promotion Managers

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[7] Note: Table displays the Healthy People 2020 Objective, the civilian estimate for the objective (as presented by the Healthy People data search (http://healthypeople.gov)), and the HRB estimate for USCG personnel. The standard error of the USCG estimate is presented in parentheses.

[8] Department of Health and Human Services (2010). *Healthy People 2020,* Retrieved September 2013 from http://healthypeople.gov.

[9] Civilian estimate was from the 2011 National Survey on Drug Use and Health (NSDUH). This survey employs a different methodology than the 2011 HRB. Due to possible differences in measurement error, comparisons should be made with caution.

and Unit Health Promotion Coordinators to help decrease obesity, high blood pressure, and high cholesterol in this group.

Similarly, pay grade had a strong relationship with three out of the four physical health indicators. Junior enlisted members had a lower prevalence of obesity and high blood pressure than senior enlisted members (i.e., E5-E6, E7-E9), warrant officers, and senior officers (i.e., O4-O10); junior enlisted members had the lowest prevalence of high cholesterol compared to the other pay grades. This is likely in part due to a strong correlation between age and pay grade. It is important to note that this relationship is describing the natural incidence of these conditions. Since junior enlisted members are typically the youngest members of the service, they should have the lowest rates of these diseases. Since age is directly related to pay grade, higher pay grade should also correlate to higher disease rates. Pay grade also relates to activity level, thus higher pay grades are typically more sedentary, which creates a predisposition for these diseases.

Analyses showed that age group also had a strong relationship with physical health indicators, with age being among the strongest covariates for three out of the four physical health indicators. Those 18 to 25 years old had lower prevalence rates of obesity, high blood pressure, and high cholesterol compared to those 26 to 65 years old, highlighting the importance of education on beginning healthy habits at a young age and maintaining them throughout life. CG-11 recommends targeting senior enlisted personnel (i.e., E7-E9) for possible intervention, as E7-E9 pay grades had the highest prevalence of obesity, high blood pressure, and high cholesterol. This group, charged with leading enlisted personnel, is in a prominent role to model healthy behaviors such as making nutritious food choices.

The average number of hours of nightly sleep was also among the strongest covariates for three out of the four physical health indicators reported. Those who reported getting an average of 4 hours or less of nightly sleep were more likely to be classified as obese and to report having high blood pressure than those who reported getting an average of 5 or more hours of nightly sleep; those who reported getting an average of 4 hours or less or 5-6 hours of nightly sleep were more likely to report having high cholesterol than those who reported getting an average of 9+ hours of sleep. This highlights the importance of sleep; further research is needed to explore the connections between sleep and health, including identifying the reasons for sleeping fewer than the recommended number of hours of sleep per night.

> Results from the 2011 HRB survey show that over half (57%) of USCG personnel were classified as being overweight and 11% as obese.[10] Metabolic syndrome, characterized by obesity, hypertension, hyperlipidemia, and impaired glucose regulation, is a major concern

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[10] Barlas, F. M., Higgins, W. B., Pflieger, J. C., & Diecker, K. (2013). *2011 Health Related Behaviors Survey of Active Duty Military Personnel*.

related to increased risk for cardiovascular disease.[11] This syndrome is preventable in the vast majority of cases and is directly related to lifestyle choices: diet, exercise, and stress. Unrecognized metabolic syndrome has been proven to lead to increased health risk and increased healthcare expenditures. Additionally, in the USCG (and other military services), the failure to recognize and intervene in metabolic syndrome can reduce military medical readiness. Efforts should be increased to address lifestyle changes that can prevent this syndrome through dietary education, fitness activities and standards, and stress management training.

The final recommendation to improve the physical health of USCG personnel is to address the question of anthropometry or the science of body measurement. The USCG should consider whether another anthropometric other than BMI is better suited for its otherwise healthy population. Waist measurement of 35 inches or more for women and 40 inches or more for men is a cardinal metabolic risk factor.[12] Abdominal obesity is a known risk factor for heart disease. Therefore, the USCG should consider and explore waist to height ratio as a measure of fitness. USCG members with a BMI over 30 should be targeted for "specific" intervention.

Tables

The following tables present an in-depth analysis of the measures of physical health reported in this chapter in the USCG.

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[11] Kahn, R., Buse, J., Ferrannini, E., & Stern, M. (2005). The metabolic syndrome: Time for a critical appraisal. *Diabetes Care, 28,* 2289-2304.
[12] Lee, C. M. Y., Huxley, R. R., Wildman, R. P., & Woodward, M. (2008). Indices of abdominal obesity are better discriminators of cardiovascular risk factors than BMI: A meta-analysis. *Journal of Clinical Epidemiology, 61,* 646-653.

Table 3.2 – Obese – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Total	10.9	(0.46)		
Platform				
Ashore	11.35	(0.57)	1.26	(0.91, 1.73)
Afloat	9.76	(0.93)	1.16	(0.81, 1.66)
Aviation	10.07	(1.40)	1.00	
Gender				
Male	11.90	(0.51) [2]	3.08	(2.16, 4.41) *
Female	4.27	(0.81) [1]	1.00	
Pay Grade				
E1-E4	5.49	(0.59) [2,3,4,6]	0.40	(0.28, 0.57) *
E5-E6	12.54	(0.80) [1,3]	0.99	(0.73, 1.34)
E7-E9	18.60	(1.73) [1,2,5]	1.67	(1.20, 2.33) *
W01-W05	19.05	(2.98) [1,5]	1.37	(0.90, 2.10)
O1-O3	9.42	(1.43) [3,4]	0.73	(0.49, 1.10)
O4-O10	12.37	(1.95) [1]	1.00	
Age Group				
18-20	1.75	(1.35) [4,5]	0.07	(0.01, 0.34) *
21-25	3.92	(0.62) [3,4,5]	0.16	(0.10, 0.26) *
26-35	10.64	(0.71) [2,4,5]	0.48	(0.33, 0.69) *
36-45	17.74	(1.29) [1,2,3]	0.86	(0.59, 1.27)
46-65	19.96	(2.78) [1,2,3]	1.00	
Race/Ethnicity				
White, non-Hispanic	9.65	(0.50) [2,4]	1.00	
African American, non-Hispanic	19.42	(2.58) [1]	2.26	(1.60, 3.18) *
Hispanic	12.82	(1.43)	1.38	(1.05, 1.81) *
Other	16.51	(2.60) [1]	1.85	(1.26, 2.72) *
Education				
High school or less	10.35	(0.97)	1.04	(0.78, 1.38)
Some college	11.46	(0.64)	1.16	(0.92, 1.47)
College graduate or higher	10.02	(0.90)	1.00	

Table 3.2 – Obese – Prevalence Rates and Odds Ratios

Family Status						
Not married	6.59	(0.62)	2,3	0.49	(0.39, 0.61)	*
Married, spouse not present	17.36	(2.06)	1,3	1.45	(1.07, 1.96)	*
Married, spouse present	12.66	(0.65)	1,2	1.00		
Children Living With You						
Yes	13.78	(0.78)	2	1.00		
No	8.71	(0.55)	1	0.60	(0.50, 0.72)	*
Combat Deployed in Past Year						
Yes	13.22	(2.87)		1.19	(0.72, 1.96)	
No	11.37	(0.54)		1.00		
Average Hours of Nightly Sleep						
9+ hours	7.71	(2.37)	4	0.83	(0.42, 1.62)	
7-8 hours	9.17	(0.72)	3,4	1.00		
5-6 hours	13.25	(0.89)	2,4	1.51	(1.20, 1.90)	*
4 hours or less	22.15	(3.86)	1,2,3	2.82	(1.76, 4.50)	*
Overall Stress in Past 12 Months						
High	11.86	(0.87)		1.11	(0.90, 1.36)	
Low	10.85	(0.64)		1.00		
History of Physical Abuse						
Yes	14.64	(1.69)	2	1.39	(1.04, 1.84)	*
No	11.02	(0.55)	1	1.00		
History of Sexual Abuse						
Yes	13.24	(1.60)		1.22	(0.91, 1.64)	
No	11.08	(0.55)		1.00		
Risk-Taking						
High Risk Taking	8.69	(1.61)		0.72	(0.48, 1.08)	
Low-Moderate Risk Taking	11.69	(0.56)		1.00		
Religiosity/Spirituality						
High	11.96	(1.05)		1.00		
Medium	11.36	(1.33)		0.94	(0.73, 1.22)	
Low	11.15	(1.05)		0.92	(0.67, 1.28)	
Not Applicable	10.59	(1.05)		0.87	(0.66, 1.16)	

Table 3.2 – Obese – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30				
Yes	10.65	(0.48)	1.00	
No	13.41	(1.77)	1.30	(0.95, 1.78)
Heavy Alcohol Use, Past 12 Months				
Yes	12.90	(1.81)	1.23	(0.88, 1.72)
No	10.73	(0.48)	1.00	
Current Smoker				
Yes	9.12	(1.02)	0.77	(0.59, 1.00)
No	11.55	(0.56)	1.00	
Depression				
High	11.06	(2.18)	0.97	(0.62, 1.51)
Low	11.42	(0.54)	1.00	
Anxiety				
High	13.54	(1.65)	1.24	(0.92, 1.67)
Low	11.20	(0.55)	1.00	
Anger				
High	14.53	(3.20)	1.33	(0.80, 2.23)
Low	11.32	(0.54)	1.00	
Resilience				
Low resilience	10.38	(2.57)	0.85	(0.48, 1.49)
Moderate resilience	11.20	(0.68)	0.92	(0.74, 1.14)
High resilience	12.03	(0.92)	1.00	
Possible PTS				
Possible PTS	9.90	(3.49)	0.85	(0.39, 1.83)
Unlikely PTS	11.47	(0.53)	1.00	
Suicidal Ideation Since Joining				
Yes	12.75	(3.18)	1.14	(0.64, 2.00)
No	11.40	(0.53)	1.00	
Self-Inflicted Injury - Lifetime				
Yes	10.07	(1.74)	0.85	(0.58, 1.26)
No	11.61	(0.55)	1.00	

Table 3.2 – Obese – Prevalence Rates and Odds Ratios

Positive Coping

Yes	10.30	(0.62)	[2]	0.76	(0.62, 0.93)	*
No	13.14	(0.93)	[1]	1.00		

Avoidance Coping

Yes	11.68	(0.90)	1.05	(0.85, 1.29)
No	11.21	(0.64)	1.00	

Social Network Facilitation - Alcohol

Yes	11.17	(0.53)	1.00	(0.67, 1.48)
No	11.20	(1.92)	1.00	

Social Network Facilitation -

Yes	11.13	(0.60)	0.98	(0.79, 1.23)
No	11.33	(0.97)	1.00	

Social Network Facilitation -

Yes	10.89	(0.63)	0.92	(0.75, 1.13)
No	11.75	(0.85)	1.00	

Social Network Facilitation -

Yes	10.04	(2.28)	0.89	(0.53, 1.47)
No	11.20	(0.52)	1.00	

Leadership Deterrence - Alcohol

Yes	11.25	(0.72)	0.99	(0.81, 1.20)
No	11.40	(0.73)	1.00	

Leadership Deterrence - Cigarettes

Yes	10.44	(0.65)	0.82	(0.67, 1.01)
No	12.42	(0.82)	1.00	

Leadership Deterrence - Smokeless

Yes	10.94	(0.68)	0.93	(0.76, 1.14)
No	11.64	(0.78)	1.00	

Leadership Deterrence - RxDrugs

Yes	11.43	(0.54)	1.29	(0.87, 1.92)
No	9.07	(1.61)	1.00	

Table 3.2 – Obese – Prevalence Rates and Odds Ratios				
Age of onset for alcohol use				
14 years old or younger	12.59	(1.31)	1.36	(0.82, 2.25)
15 to 17 years old	11.17	(0.80)	1.18	(0.74, 1.90)
18 to 20 years old	11.40	(1.00)	1.21	(0.74, 1.97)
21 years old or older	9.05	(1.17)	0.94	(0.55, 1.59)
I have never consumed any alcohol	9.61	(1.99)	1.00	
Age of onset for tobacco use				
14 years old or younger	10.83	(1.95)	0.94	(0.62, 1.42)
15 to 17 years old	9.52	(1.17)	0.81	(0.60, 1.09)
18 to 20 years old	10.19	(1.28)	0.88	(0.65, 1.18)
21 years old or older	13.50	(2.38)	1.20	(0.79, 1.83)
I have never smoked cigarettes	11.48	(0.65)	1.00	

Note: Table displays the percentage and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as obese. The standard error and 95% confidence interval for each estimate is presented in parentheses. Obese is defined as a BMI ≥ 30.0 for adults 20 years of age or older. For the criteria used to classify personnel 18 and 19 years old, see Appendix A.
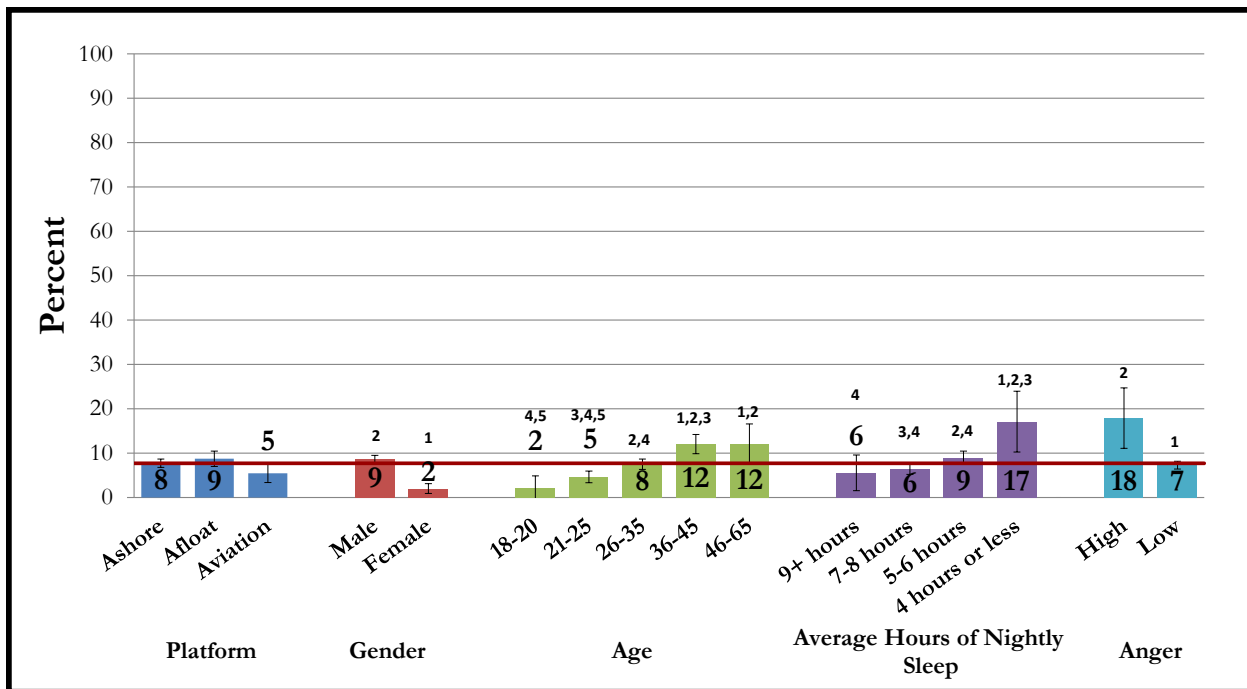
[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting being obese; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Obese, Q4, Q15, Q16, Q17).

Table 3.3 – Vigorous Exercise – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Total	91.67	(0.41)			
Platform					
Ashore	91.24	(0.51)	0.93	(0.65, 1.33)	
Afloat	92.51	(0.84)	1.05	(0.70, 1.58)	
Aviation	92.80	(1.22)	1.00		
Gender					
Male	92.21	(0.43) [2]	1.71	(1.34, 2.17)	*
Female	88.26	(1.31) [1]	1.00		
Pay Grade					
E1-E4	92.98	(0.67) [3]	1.57	(1.09, 2.27)	*
E5-E6	91.82	(0.67) [3]	1.23	(0.87, 1.74)	
E7-E9	86.70	(1.54) [1,2,5]	0.72	(0.49, 1.05)	
W01-W05	90.02	(2.34)	0.86	(0.52, 1.43)	
O1-O3	93.55	(1.22) [3]	1.59	(1.00, 2.52)	*
O4-O10	90.89	(1.72)	1.00		
Age Group					
18-20	94.04	(2.47)	2.20	(0.84, 5.73)	
21-25	93.58	(0.80) [4,5]	2.03	(1.24, 3.34)	*
26-35	92.77	(0.60) [4]	1.79	(1.13, 2.83)	*
36-45	88.26	(1.11) [2,3]	1.05	(0.65, 1.68)	
46-65	87.77	(2.33) [2]	1.00		
Race/Ethnicity					
White, non-Hispanic	91.68	(0.47)	1.00		
African American, non-Hispanic	89.40	(2.05)	0.77	(0.49, 1.19)	
Hispanic	93.10	(1.10)	1.22	(0.86, 1.75)	
Other	90.98	(2.02)	0.92	(0.56, 1.50)	
Education					
High school or less	90.41	(0.95)	0.75	(0.55, 1.03)	
Some college	91.75	(0.56)	0.89	(0.68, 1.16)	
College graduate or higher	92.62	(0.79)	1.00		

Table 3.3 – Vigorous Exercise – Prevalence Rates and Odds Ratios						
Family Status						
Not married	92.12	(0.68)		1.09	(0.87, 1.38)	
Married, spouse not present	91.24	(1.56)		0.97	(0.65, 1.46)	
Married, spouse present	91.44	(0.55)		1.00		
Children Living With You						
Yes	90.50	(0.67)	[2]	1.00		
No	92.55	(0.52)	[1]	1.31	(1.06, 1.61)	*
Combat Deployed in Past Year						
Yes	94.89	(1.89)		1.76	(0.82, 3.80)	
No	91.34	(0.48)		1.00		
Average Hours of Nightly Sleep						
9+ hours	93.77	(2.22)		1.16	(0.54, 2.49)	
7-8 hours	92.86	(0.65)		1.00		
5-6 hours	90.31	(0.79)		0.72	(0.55, 0.93)	*
4 hours or less	88.38	(3.03)		0.58	(0.32, 1.07)	
Overall Stress in Past 12 Months						
High	89.31	(0.84)	[2]	0.66	(0.53, 0.84)	*
Low	92.64	(0.54)	[1]	1.00		
History of Physical Abuse						
Yes	88.03	(1.58)	[2]	0.65	(0.48, 0.90)	*
No	91.82	(0.49)	[1]	1.00		
History of Sexual Abuse						
Yes	88.27	(1.54)	[2]	0.67	(0.49, 0.92)	*
No	91.81	(0.49)	[1]	1.00		
Risk-Taking						
High Risk Taking	93.52	(1.42)		1.38	(0.86, 2.21)	
Low-Moderate Risk Taking	91.28	(0.50)		1.00		
Religiosity/Spirituality						
High	91.49	(0.92)		1.00		
Medium	92.52	(0.74)	[3]	1.15	(0.84, 1.57)	
Low	88.62	(1.36)	[2]	0.72	(0.51, 1.03)	
Not Applicable	91.28	(0.93)		0.97	(0.70, 1.35)	

Table 3.3 – Vigorous Exercise – Prevalence Rates and Odds Ratios

Heavy Alcohol Use, Past 12 Months

Yes	86.56	(1.89)	2	0.56	(0.40, 0.78)	*
No	92.00	(0.43)	1	1.00		

Current Smoker

Yes	88.40	(1.16)	2	0.63	(0.49, 0.81)	*
No	92.37	(0.47)	1	1.00		

Depression

High	82.59	(2.69)	2	0.42	(0.28, 0.61)	*
Low	91.91	(0.47)	1	1.00		

Anxiety

High	88.83	(1.55)		0.72	(0.52, 1.00)	
Low	91.69	(0.49)		1.00		

Anger

High	87.54	(3.03)		0.65	(0.37, 1.13)	
Low	91.56	(0.48)		1.00		

Resilience

Low resilience	87.11	(2.85)		0.53	(0.31, 0.91)	*
Moderate resilience	90.94	(0.63)		0.79	(0.61, 1.03)	
High resilience	92.71	(0.74)		1.00		

Possible PTS

Possible PTS	82.51	(4.51)	2	0.43	(0.23, 0.80)	*
Unlikely PTS	91.62	(0.47)	1	1.00		

Suicidal Ideation Since Joining Military

Yes	84.38	(3.52)	2	0.49	(0.29, 0.83)	*
No	91.71	(0.47)	1	1.00		

Self-Inflicted Injury - Lifetime

Yes	89.43	(1.81)		0.76	(0.51, 1.13)	
No	91.74	(0.48)		1.00		

Positive Coping

High	94.61	(0.47)	2	2.96	(2.33,3.76)	*
Low	85.56	(0.99)	1	1.00		

Table 3.3 – Vigorous Exercise – Prevalence Rates and Odds Ratios

Avoidance Coping

High	91.68	(0.79)		1.07	(0.83, 1.37)	
Low	91.17	(0.58)		1.00		

Social Network Facilitation - Alcohol

Yes	91.34	(0.48)		0.71	(0.43, 1.18)	
No	93.68	(1.50)		1.00		

Social Network Facilitation - Cigarettes

Yes	91.68	(0.53)		1.08	(0.84, 1.39)	
No	91.08	(0.88)		1.00		

Social Network Facilitation - Smokeless

Yes	92.59	(0.54)	2	1.43	(1.13, 1.80)	*
No	89.74	(0.81)	1	1.00		

Social Network Facilitation - RxDrugs

Yes	92.69	(2.00)		1.19	(0.66, 2.14)	
No	91.44	(0.47)		1.00		

Leadership Deterrence - Alcohol

Yes	92.46	(0.62)	2	1.28	(1.02, 1.62)	*
No	90.53	(0.68)	1	1.00		

Leadership Deterrence - Cigarettes

Yes	91.73	(0.60)		1.07	(0.85, 1.35)	
No	91.18	(0.72)		1.00		

Leadership Deterrence - Smokeless

Yes	91.73	(0.61)		1.07	(0.85, 1.35)	
No	91.19	(0.70)		1.00		

Leadership Deterrence - RxDrugs

Yes	91.55	(0.48)		1.10	(0.73, 1.64)	
No	90.81	(1.64)		1.00		

Age of onset for alcohol use

14 years old or younger	91.51	(1.11)	0.70	(0.37, 1.31)	
15 to 17 years old	90.33	(0.77)	0.61	(0.34, 1.09)	
18 to 20 years old	91.96	(0.86)	0.74	(0.41, 1.36)	
21 years old or older	93.23	(1.03)	0.90	(0.47, 1.71)	
I have never consumed any alcohol	93.90	(1.64)	1.00		

Table 3.3 – Vigorous Exercise – Prevalence Rates and Odds Ratios						
Age of onset for tobacco use						
14 years old or younger	88.66	(2.03)		0.58	(0.38, 0.89)	*
15 to 17 years old	89.21	(1.26)	5	0.61	(0.45, 0.83)	*
18 to 20 years old	90.71	(1.24)		0.73	(0.52, 1.01)	
21 years old or older	87.25	(2.36)	5	0.51	(0.33, 0.79)	*
I have never smoked cigarettes	93.09	(0.53)	2,4	1.00		

Note: Table displays the percentage and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who indicated they engaged in vigorous physical exercise in the past 30 days. The standard error and 95% confidence interval for each estimate is presented in parentheses. Vigorous physical activity is defined as "exertion that is high enough to find it difficult to carry on a conversation during the activity."

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting vigorous physical exercise in the past 30 days; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Vigorous Exercise, Past 30 Days, Q23B).

Table 3.4 – High Blood Pressure – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	7.71	(0.39)			
Platform					
Ashore	7.71	(0.48)		1.48	(0.99, 2.24)
Afloat	8.74	(0.89)		1.73	(1.11, 2.70) *
Aviation	5.46	(1.06)		1.00	
Gender					
Male	8.61	(0.45)	[2]	3.58	(2.26, 5.65) *
Female	2.02	(0.56)	[1]	1.00	
Pay Grade					
E1-E4	4.90	(0.56)	[2,3,4,6]	0.41	(0.28, 0.61) *
E5-E6	8.32	(0.67)	[1]	0.75	(0.54, 1.06)
E7-E9	12.21	(1.47)	[1,5]	1.17	(0.80, 1.70)
W01-W05	11.88	(2.47)	[1]	1.07	(0.66, 1.75)
O1-O3	5.79	(1.15)	[3]	0.54	(0.33, 0.87) *
O4-O10	11.16	(1.86)	[1]	1.00	
Age Group					
18-20	2.03	(1.46)	[4,5]	0.15	(0.03, 0.67) *
21-25	4.65	(0.68)	[3,4,5]	0.35	(0.21, 0.59) *
26-35	7.50	(0.61)	[2,4]	0.59	(0.37, 0.93) *
36-45	12.03	(1.11)	[1,2,3]	0.99	(0.62, 1.58)
46-65	12.11	(2.29)	[1,2]	1.00	
Race/Ethnicity					
White, non-Hispanic	7.27	(0.44)	[2,4]	1.00	
African American, non-Hispanic	13.60	(2.25)	[1,3]	2.01	(1.35, 2.98) *
Hispanic	6.17	(1.03)	[2,4]	0.84	(0.58, 1.21)
Other	12.67	(2.32)	[1,3]	1.85	(1.21, 2.84) *
Education					
High school or less	6.59	(0.79)		0.87	(0.62, 1.21)
Some college	8.25	(0.55)		1.10	(0.85, 1.44)
College graduate or higher	7.54	(0.79)		1.00	

Table 3.4 – High Blood Pressure – Prevalence Rates and Odds Ratios

Family Status

Not married	5.96	(0.59)	[3]	0.67	(0.52, 0.85)	*
Married, spouse not present	8.59	(1.53)		0.99	(0.66, 1.48)	
Married, spouse present	8.68	(0.55)	[1]	1.00		

Children Living With You

Yes	8.78	(0.64)	[2]	1.00		
No	6.91	(0.50)	[1]	0.77	(0.62, 0.96)	*

Combat Deployed in Past Year

Yes	9.14	(2.45)		1.21	(0.67, 2.18)	
No	7.69	(0.45)		1.00		

Average Hours of Nightly Sleep

9+ hours	5.56	(2.04)	[4]	0.86	(0.39, 1.89)	
7-8 hours	6.39	(0.61)	[3,4]	1.00		
5-6 hours	8.99	(0.76)	[2,4]	1.45	(1.10, 1.90)	*
4 hours or less	17.09	(3.50)	[1,2,3]	3.02	(1.79, 5.09)	*

Overall Stress in Past 12 Months

High	9.73	(0.80)	[2]	1.54	(1.21, 1.95)	*
Low	6.56	(0.51)	[1]	1.00		

History of Physical Abuse

Yes	11.80	(1.54)	[2]	1.74	(1.26, 2.39)	*
No	7.16	(0.45)	[1]	1.00		

History of Sexual Abuse

Yes	7.74	(1.27)		1.00	(0.69, 1.45)	
No	7.73	(0.47)		1.00		

Risk-Taking

High Risk Taking	8.49	(1.59)		1.12	(0.74, 1.71)	
Low-Moderate Risk Taking	7.62	(0.47)		1.00		

Religiosity/Spirituality

High	7.57	(0.86)		1.00		
Medium	8.49	(0.77)		1.13	(0.83, 1.54)	
Low	7.19	(1.09)		0.95	(0.63, 1.41)	
Not Applicable	7.19	(0.84)		0.95	(0.67, 1.34)	

Table 3.4 – High Blood Pressure – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30 Days

Yes	7.44	(0.41)	[2]	1.00		
No	10.87	(1.62)	[1]	1.52	(1.07, 2.15)	*

Heavy Alcohol Use, Past 12 Months

Yes	9.49	(1.59)	1.30	(0.89, 1.90)	
No	7.48	(0.41)	1.00		

Current Smoker

Yes	10.63	(1.09)	[2]	1.60	(1.23, 2.08)	*
No	6.92	(0.45)	[1]	1.00		

Depression

High	11.69	(2.23)	[2]	1.64	(1.06, 2.56)	*
Low	7.45	(0.45)	[1]	1.00		

Anxiety

High	12.66	(1.61)	[2]	1.89	(1.38, 2.59)	*
Low	7.11	(0.45)	[1]	1.00		

Anger

High	17.89	(3.48)	[2]	2.78	(1.72, 4.48)	*
Low	7.28	(0.44)	[1]	1.00		

Resilience

Low resilience	7.63	(2.23)	1.00	(0.52, 1.92)	
Moderate resilience	7.72	(0.58)	1.01	(0.78, 1.32)	
High resilience	7.62	(0.75)	1.00		

Possible PTS

Possible PTS	15.72	(4.27)	[2]	2.28	(1.20, 4.33)	*
Unlikely PTS	7.56	(0.44)	[1]	1.00		

Suicidal Ideation Since Joining Military

Yes	9.80	(2.84)	1.30	(0.69, 2.47)	
No	7.69	(0.45)	1.00		

Self-Inflicted Injury - Lifetime

Yes	9.40	(1.68)	1.26	(0.84, 1.90)	
No	7.60	(0.46)	1.00		

Table 3.4 – High Blood Pressure – Prevalence Rates and Odds Ratios				
Positive Coping				
High	7.40	(0.54)	0.88	(0.69, 1.13)
Low	8.32	(0.77)	1.00	
Avoidance Coping				
High	8.38	(0.78)	1.16	(0.90, 1.49)
Low	7.30	(0.53)	1.00	
Social Network Facilitation - Alcohol				
Yes	7.62	(0.45)	1.00	(0.63, 1.60)
No	7.61	(1.62)	1.00	
Social Network Facilitation - Cigarettes				
Yes	7.66	(0.51)	1.01	(0.77, 1.31)
No	7.61	(0.81)	1.00	
Social Network Facilitation - Smokeless				
Yes	7.62	(0.54)	1.01	(0.79, 1.29)
No	7.56	(0.70)	1.00	
Social Network Facilitation - RxDrugs				
Yes	7.91	(2.05)	1.04	(0.59, 1.83)
No	7.61	(0.44)	1.00	
Leadership Deterrence - Alcohol				
Yes	7.51	(0.61)	0.96	(0.75, 1.22)
No	7.82	(0.62)	1.00	
Leadership Deterrence - Cigarettes				
Yes	7.20	(0.55)	0.86	(0.68, 1.10)
No	8.24	(0.69)	1.00	
Leadership Deterrence - Smokeless				
Yes	7.56	(0.58)	0.97	(0.76, 1.23)
No	7.78	(0.65)	1.00	
Leadership Deterrence - RxDrugs				
Yes	7.52	(0.45)	0.80	(0.54, 1.19)
No	9.23	(1.62)	1.00	

Table 3.4 – High Blood Pressure – Prevalence Rates and Odds Ratios						
Age of onset for alcohol use						
14 years old or younger	8.49	(1.10)		0.91	(0.53, 1.55)	
15 to 17 years old	7.47	(0.67)		0.79	(0.48, 1.29)	
18 to 20 years old	8.56	(0.88)		0.91	(0.55, 1.52)	
21 years old or older	5.31	(0.91)		0.55	(0.31, 0.98)	*
I have never consumed any alcohol	9.28	(1.96)		1.00		
Age of onset for tobacco use						
14 years old or younger	11.25	(2.00)		1.81	(1.19, 2.77)	
15 to 17 years old	8.80	(1.13)		1.38	(1.00, 1.90)	
18 to 20 years old	7.94	(1.15)		1.23	(0.87, 1.75)	*
21 years old or older	12.49	(2.32)	5	2.04	(1.31, 3.18)	
I have never smoked cigarettes	6.54	(0.51)	4	1.00		

Note: Table displays the percentage and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who indicated they had been told by a doctor or other health care professional that they had high blood pressure within the past 2 years. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high blood pressure within the past 2 years; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Blood Pressure, Past 2 Years, Q26A).

Table 3.5 – High Cholesterol – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Total	10.54	(0.45)		
Platform				
Ashore	11.25	(0.57) [2]	0.98	(0.72, 1.34)
Afloat	8.27	(0.87) [1]	0.83	(0.58, 1.20)
Aviation	10.68	(1.44)	1.00	
Gender				
Male	11.37	(0.50) [2]	2.10	(1.52, 2.91) *
Female	5.23	(0.89) [1]	1.00	
Pay Grade				
E1-E4	3.15	(0.45) [2,3,4,5,6]	0.16	(0.11, 0.23) *
E5-E6	10.70	(0.75) [1,3,4,6]	0.50	(0.38, 0.66) *
E7-E9	21.67	(1.84) [1,2,5]	1.30	(0.96, 1.75)
W01-W05	22.38	(3.17) [1,2,5]	1.12	(0.76, 1.66)
O1-O3	11.73	(1.58) [1,3,4]	0.60	(0.42, 0.86) *
O4-O10	19.65	(2.35) [1,2]	1.00	
Age Group				
18-20	1.08	(1.06) [4,5]	0.03	(0.00, 0.23) *
21-25	2.21	(0.47) [3,4,5]	0.07	(0.04, 0.11) *
26-35	8.48	(0.64) [2,4,5]	0.27	(0.19, 0.39) *
36-45	22.70	(1.42) [1,2,3]	0.87	(0.61, 1.24)
46-65	25.22	(3.03) [1,2,3]	1.00	
Race/Ethnicity				
White, non-Hispanic	10.26	(0.51) [4]	1.00	
African American, non-Hispanic	9.27	(1.90) [4]	0.89	(0.57, 1.41)
Hispanic	10.37	(1.30) [4]	1.01	(0.75, 1.36)
Other	18.10	(2.68) [1,2,3]	1.93	(1.34, 2.80) *
Education				
High school or less	7.17	(0.82) [2,3]	0.48	(0.36, 0.65) *
Some college	10.43	(0.61) [1,3]	0.73	(0.59, 0.90) *
College graduate or higher	13.77	(1.03) [1,2]	1.00	

Table 3.5 – High Cholesterol – Prevalence Rates and Odds Ratios

Family Status

Not married	6.28	(0.61)	2,3	0.46	(0.36, 0.58)	*
Married, spouse not present	13.11	(1.84)	1	1.03	(0.73, 1.44)	
Married, spouse present	12.80	(0.65)	1	1.00		

Children Living With You

Yes	14.00	(0.78)	2	1.00		
No	7.95	(0.53)	1	0.53	(0.44, 0.64)	*

Combat Deployed in Past Year

Yes	8.21	(2.32)	0.70	(0.38, 1.29)	
No	11.31	(0.54)	1.00		

Average Hours of Nightly Sleep

9+ hours	3.96	(1.74)	3,4	0.36	(0.14, 0.88)	*
7-8 hours	10.36	(0.76)		1.00		
5-6 hours	12.35	(0.87)	1	1.22	(0.97, 1.53)	
4 hours or less	16.96	(3.49)	1	1.77	(1.06, 2.94)	*

Overall Stress in Past 12 Months

High	12.67	(0.90)	2	1.28	(1.04, 1.58)	*
Low	10.17	(0.62)	1	1.00		

History of Physical Abuse

Yes	11.88	(1.54)	1.10	(0.80, 1.49)	
No	10.96	(0.55)	1.00		

History of Sexual Abuse

Yes	10.67	(1.46)	0.96	(0.70, 1.32)	
No	11.09	(0.55)	1.00		

Risk-Taking

High Risk Taking	8.89	(1.63)	0.76	(0.51, 1.15)	
Low-Moderate Risk Taking	11.35	(0.56)	1.00		

Religiosity/Spirituality

High	11.20	(1.03)	1.00		
Medium	11.19	(0.87)	1.00	(0.77, 1.30)	
Low	9.89	(1.26)	0.87	(0.62, 1.23)	
Not Applicable	11.49	(1.04)	1.03	(0.77, 1.37)	

Table 3.5 – High Cholesterol – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30 Days

Yes	9.88	(0.47)	[2]	1.00		
No	16.61	(1.93)	[1]	1.82	(1.36, 2.43)	*

Heavy Alcohol Use, Past 12 Months

Yes	12.21	(1.78)	1.19	(0.85, 1.67)	
No	10.49	(0.47)	1.00		

Current Smoker

Yes	9.97	(1.06)	0.87	(0.67, 1.13)	
No	11.28	(0.56)	1.00		

Depression

High	12.89	(2.33)	1.21	(0.79, 1.83)	
Low	10.93	(0.53)	1.00		

Anxiety

High	14.69	(1.71)	[2]	1.46	(1.10, 1.96)	*
Low	10.53	(0.54)	[1]	1.00		

Anger

High	14.28	(3.18)	1.35	(0.80, 2.26)	
Low	11.01	(0.53)	1.00		

Resilience

Low resilience	8.52	(2.35)	0.76	(0.41, 1.41)	
Moderate resilience	11.63	(0.69)	1.07	(0.86, 1.34)	
High resilience	10.92	(0.89)	1.00		

Possible PTS

Possible PTS	12.35	(3.85)	1.13	(0.56, 2.27)	
Unlikely PTS	11.09	(0.53)	1.00		

Suicidal Ideation Since Joining Military

Yes	19.36	(3.78)	[2]	1.97	(1.21, 3.19)	*
No	10.88	(0.52)	[1]	1.00		

Self-Inflicted Injury - Lifetime

Yes	13.97	(2.00)	1.33	(0.94, 1.87)	
No	10.90	(0.54)	1.00		

Table 3.5 – High Cholesterol – Prevalence Rates and Odds Ratios

Positive Coping

High	10.48	(0.63)	0.87	(0.70, 1.08)
Low	11.85	(0.89)	1.00	

Avoidance Coping

High	11.09	(0.88)	1.01	(0.81, 1.25)
Low	11.04	(0.64)	1.00	

Social Network Facilitation - Alcohol

Yes	11.16	(0.53)	1.23	(0.81, 1.88)
No	9.26	(1.76)	1.00	

Social Network Facilitation - Cigarettes

Yes	10.76	(0.59)	0.91	(0.73, 1.14)
No	11.69	(0.98)	1.00	

Social Network Facilitation - Smokeless

Yes	10.69	(0.63)	0.92	(0.74, 1.13)
No	11.56	(0.85)	1.00	

Social Network Facilitation - RxDrugs

Yes	10.40	(2.32)	0.93	(0.57, 1.53)
No	11.07	(0.52)	1.00	

Leadership Deterrence - Alcohol

Yes	11.03	(0.72)	1.00	(0.81, 1.22)
No	11.07	(0.72)	1.00	

Leadership Deterrence - Cigarettes

Yes	11.33	(0.68)	1.07	(0.87, 1.31)
No	10.70	(0.77)	1.00	

Leadership Deterrence - Smokeless

Yes	11.48	(0.70)	1.10	(0.89, 1.34)
No	10.59	(0.75)	1.00	

Leadership Deterrence - RxDrugs

Yes	11.15	(0.53)	1.15	(0.78, 1.68)
No	9.85	(1.67)	1.00	

Table 3.5 – High Cholesterol – Prevalence Rates and Odds Ratios

Age of onset for alcohol use					
14 years old or younger	13.14	(1.33)	1.19	(0.74, 1.91)	
15 to 17 years old	11.97	(0.83)	1.07	(0.69, 1.66)	
18 to 20 years old	9.84	(0.93)	0.86	(0.54, 1.36)	
21 years old or older	8.24	(1.12)	0.70	(0.42, 1.17)	
I have never consumed any alcohol	11.30	(2.13)	1.00		
Age of onset for tobacco use					
14 years old or younger	15.27	(2.26)	1.51	(1.05, 2.18)	*
15 to 17 years old	9.55	(1.17)	0.88	(0.66, 1.19)	
18 to 20 years old	10.86	(1.32)	1.02	(0.76, 1.37)	
21 years old or older	14.36	(2.45)	1.40	(0.93, 2.12)	
I have never smoked cigarettes	10.67	(0.63)	1.00		

Note: Table displays the percentage and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who indicated they had been told by a doctor or other health care professional that they had high cholesterol within the past 2 years. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high cholesterol within the past 2 years; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Cholesterol, Past 2 Years, Q26C).

Chapter 4: Substance Abuse

The 2011 HRB Survey included several questions on substance use, including alcohol, tobacco, and prescription drug use and misuse. This chapter presents findings on prevalence rates of substance use and identifies covariates of substance use. Chapter 4 is presented in three subsections, as follows:

- Section 4.1 presents an analysis of alcohol use and abuse in the USCG.

- Section 4.2. Tobacco Use presents an analysis of cigarette smoking and smokeless tobacco use, as well as attempts to quit or reduce smoking.

- Section 4.3. Prescription Drug Use presents an analysis of prescription use of sedatives and pain relievers, as well as prescription drug misuse. Overall prevalence rates for use of prescription anabolic steroids and stimulants are also presented.

Tables presenting results for each outcome measure are at the end of each section. Figures are also presented that show prevalence rates by platform and four variables that exhibit strong relationships with each outcome variable of interest (i.e., strong odds ratio in comparison to the reference category). The overall prevalence rate for each outcome is also displayed as a red horizontal line in each figure.

A new domain was added to the 2011 HRB Survey to assess social network facilitation of substance use. This domain measured the possible influence of peers on service members' substance use behaviors by assessing how many of their friends use various substances during off-duty hours, including drinking alcohol, smoking cigarettes or marijuana, using chewing tobacco, or misusing prescription drugs. The assumption is that a culture of substance use in which service members' peers are engaging in these behaviors may facilitate an individual's substance use, perhaps implying that the behavior is condoned and accepted.

4.1 Alcohol Use and Abuse

The survey included a number of measures of alcohol use to provide a comprehensive assessment of the extent of alcohol use and abuse among active duty USCG members and associated risk characteristics. This section presents the results of a detailed analysis of alcohol use in the USCG, including current prevalence rates of alcohol use, heavy drinking, and serious consequences and work productivity loss as a result of drinking in the past 12 months. Hazardous or more severe drinking (i.e., hazardous, harmful, or possible alcohol dependence) is also presented, which is based

on the Alcohol Use Disorders Identification Test (AUDIT).[1] In addition, results show which characteristics demonstrate strong associations with each measure of alcohol use and abuse.

As discussed in Chapter 2: Methodology, skip and branching logic were used in the web-based questionnaire. Respondents who indicated that they did not have at least 12 alcoholic drinks over their entire lifetime and did not drink alcohol in the past 12 months were not asked many of the alcohol questions as they were not applicable to them.

Overview of Findings

4.1.1 *Current Drinkers*

We first assessed the extent of alcohol use in the USCG. Current drinkers were defined as having at least 12 drinks in their lifetime and one or more days of drinking in the past 12 months. The following analyses focus on current drinkers.

Approximately 91% of active duty USCG personnel were current drinkers (see Table 4.1.1). Figure 4.1.A presents the relationship of platform to current drinking, as well as four variables that have strong associations with being a current drinker in the USCG: lower levels of religiosity/spirituality, higher levels of resilience, social network facilitation of alcohol use, and age of onset for tobacco use.[2]

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[1] Definitions for all of the measures reported in this section are explained in Appendix A: Key Definitions and Measures.
[2] Although the relationship between age group and current drinker status was very strong (e.g., odds ratio for 18 to 20 year olds = 0.10), it was not included as one of the top covariates since the relationship is partially due to the legal drinking age in the United States being 21 years of age and older. However, 40% of 18 to 20 year olds were current drinkers.

Figure 4.1.A: Indicators Associated with Being a Current Drinker[3]
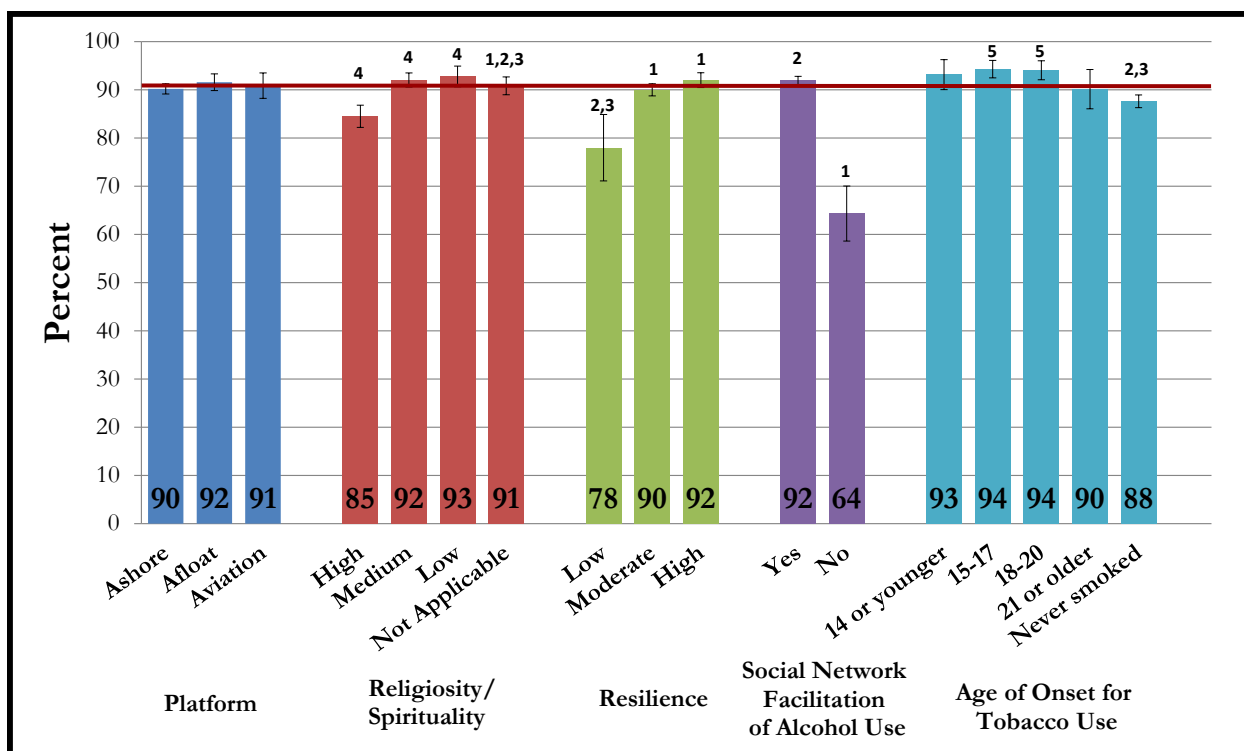
- There were no significant differences in current drinker status by platform.

- USCG personnel who were classified as having high religiosity/spirituality had the lowest prevalence rate of current drinking (85% vs. 91%-93%).

- USCG personnel with low resilience had the lowest prevalence rate of current drinking compared to those with moderate or high resilience (78% vs. 90%-92%).

- USCG personnel who experienced social network facilitation of alcohol use had a higher prevalence rate of current drinking than those who did not experience social network facilitation of alcohol use (92% vs. 64%).

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[3] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group. For example, consider the resilience bars in this figure:

   [1]Indicates estimate is significantly different from the estimate in bar #1 (Low resilience) at the 95% confidence level after Bonferroni adjustment.
   [2]Indicates estimate is significantly different from the estimate in bar #2 (Moderate resilience) at the 95% confidence level after Bonferroni adjustment.
   [3]Indicates estimate is significantly different from the estimate in bar #3 (High resilience) at the 95% confidence level after Bonferroni adjustment.

- Age of onset for tobacco use was associated with being a current drinker, with those who initiated tobacco use between 15 and 20 years old (i.e., 15-17, 18-20) having higher prevalence rates of current drinking than personnel who never smoked cigarettes (94% vs. 88%).

4.1.2 *Heavy Alcohol Use*

Respondents were classified into five drinking levels – lifetime abstainers, former drinkers, current light/infrequent drinkers, moderate drinkers, and heavy drinkers. This classification scheme was based on the definitions established by the 2010 National Health Interview Survey (NHIS) from the Centers for Disease Control and Prevention (CDC). The survey questions from the 2011 HRB that served as the basis for the classification were also from the NHIS. The following presents results of analyses on heavy drinkers, which were defined as consuming more than 14 drinks per week on average for males and more than 7 drinks per week on average for females, in the past 12 months.

Approximately 7% of active duty USCG personnel were heavy alcohol users (see Table 4.1.2). Figure 4.1.B presents the relationship between platform and heavy alcohol use, along with four variables strongly associated with being a heavy drinker in the USCG: possible posttraumatic stress (PTS), social network facilitation of alcohol use, age of onset for alcohol use, and age of onset for tobacco use.

Figure 4.1.B: Indicators Associated with Heavy Alcohol Use[4]
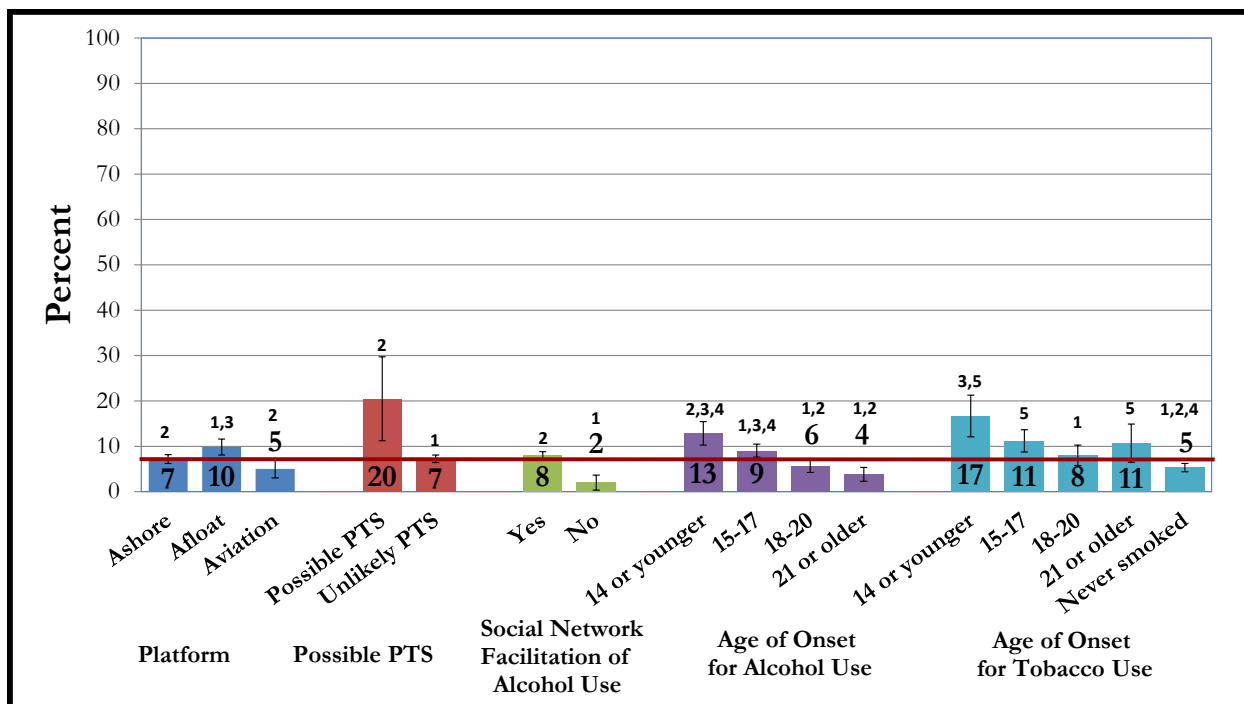
- USCG personnel who were stationed afloat had the highest prevalence rate of heavy alcohol use compared to those stationed ashore or aviation (10% vs. 5%-7%).

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of heavy alcohol use than those who were classified as unlikely to have PTS (20% vs. 7%).

- Similar to current drinking, those who experienced social network facilitation of alcohol use had a higher prevalence rate of heavy alcohol use than those who did not experience social network facilitation of alcohol use (8% vs. 2%).

- USCG personnel who initiated alcohol use at age 14 or younger had the highest prevalence rate of heavy alcohol use compared to those who initiated alcohol use at age 15 or older (13% vs. 4%-9%).

- A similar pattern emerged for age of onset for tobacco use – those who initiated tobacco use at 14 years old or younger had a higher prevalence rate of heavy alcohol use than those who initiated tobacco use at age 18 to 20 or those who never smoked cigarettes (17% vs. 5%-8%).

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[4] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

The definition of a "heavy drinker" is based on a definition that has been set forth by the Centers for Disease Control and Prevention (CDC) in their NHIS survey. To reiterate, the classification scheme for the analyses on heavy drinkers was defined as consuming more than 14 drinks per week on average for males and more than 7 drinks per week on average for females, in the past 12 months. We also asked individuals to indicate the number of drinks it typically takes them to feel drunk. The median number of drinks that it took heavy drinkers to feel drunk was 6 or more drinks and that the largest number of drinks consumed by heavy drinkers on one occasion was 10 on average (see Figure 4.1.C). It is likely that the accuracy of how many drinks have in fact been drunk after drinking more than 6 or 10 drinks can be called into question. Given that many drinks have more than one fluid ounce of alcohol (e.g., 22 oz. beer or an "Irish Car Bomb"), it is possible that these reported estimates are under-reported. What should be alarming, according to CG-11 leadership, is the amount of drinking that is done in one sitting and the fact is that the behavior may be repeated multiple times during any given 30 day period. This overconsumption period may be tied to the length of liberty for the afloat and aviation communities.

Figure 4.1.C: Largest Number of Alcoholic Drinks in Past 30 Days and Number of Drinks to Feel Drunk
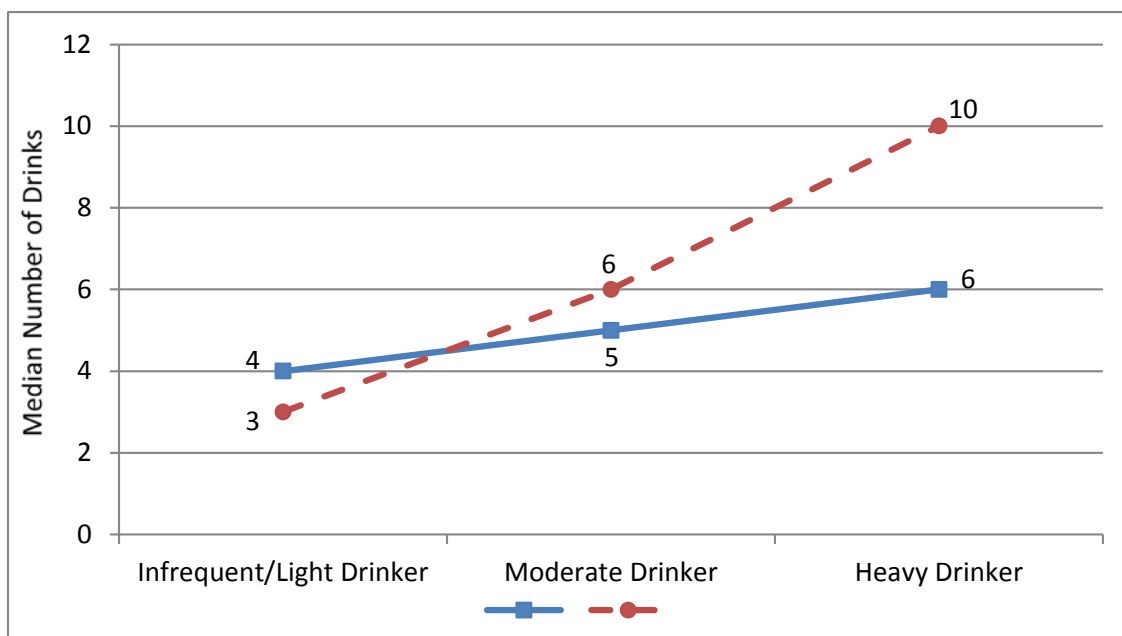
4.1.3 *Hazardous or More Severe Alcohol Use (AUDIT Score ≥ 8)*

The Alcohol Use Disorders Identification Test (AUDIT) was administered as part of the questionnaire to determine the potential for alcohol dependence across military components. The AUDIT is based on 10 items regarding history of alcohol use. Responses to these items were recoded based on the AUDIT scale scoring guide developed by the World Health Organization

(WHO); the AUDIT scale score ranges from 1 to 40 and was categorized based on WHO scoring guidelines, as follows:

- Low Risk (AUDIT score < 8)
- Hazardous Drinking (AUDIT score 8-15)
- Harmful Drinking (AUDIT score 16-19)
- Possible Alcohol Dependence (AUDIT score of 20+)

The following analyses are based on those who fell into the hazardous drinking, harmful drinking, or possible alcohol dependence categories (AUDIT score 8+).

Among active duty USCG personnel, 10% were categorized as engaging in hazardous or more severe alcohol use (see Table 4.1 and Table 4.1.3). The majority (90.3%) of USCG personnel were categorized as low risk drinkers according to their AUDIT score.

Table 4.1 – AUDIT Scores Among USCG Personnel	
AUDIT Score	Percent (SE)
Less than 8 – Low Risk	90.3 (0.4)
8 to 15 – Hazardous Drinking	7.6 (0.4)
16 to 19 – Harmful Drinking	0.7 (0.1)
20 or higher – Possible Dependence	1.4 (0.2)

Note: Table displays the percentage of USCG personnel who were classified in each category of AUDIT scores. The standard error of each estimate is presented in parentheses.
Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (AUDIT, Q46, Q47, Q48A-F, Q49A-B).

Figure 4.1.D presents the association between platform and hazardous or more severe alcohol use, in addition to four variables strongly associated with engaging in hazardous or more severe drinking in the USCG: possible PTS, social network facilitation of alcohol use, social network facilitation of prescription drug misuse, and age of onset for alcohol use.

Figure 4.1.D: Indicators Associated with Hazardous or More Severe Alcohol Use[5]
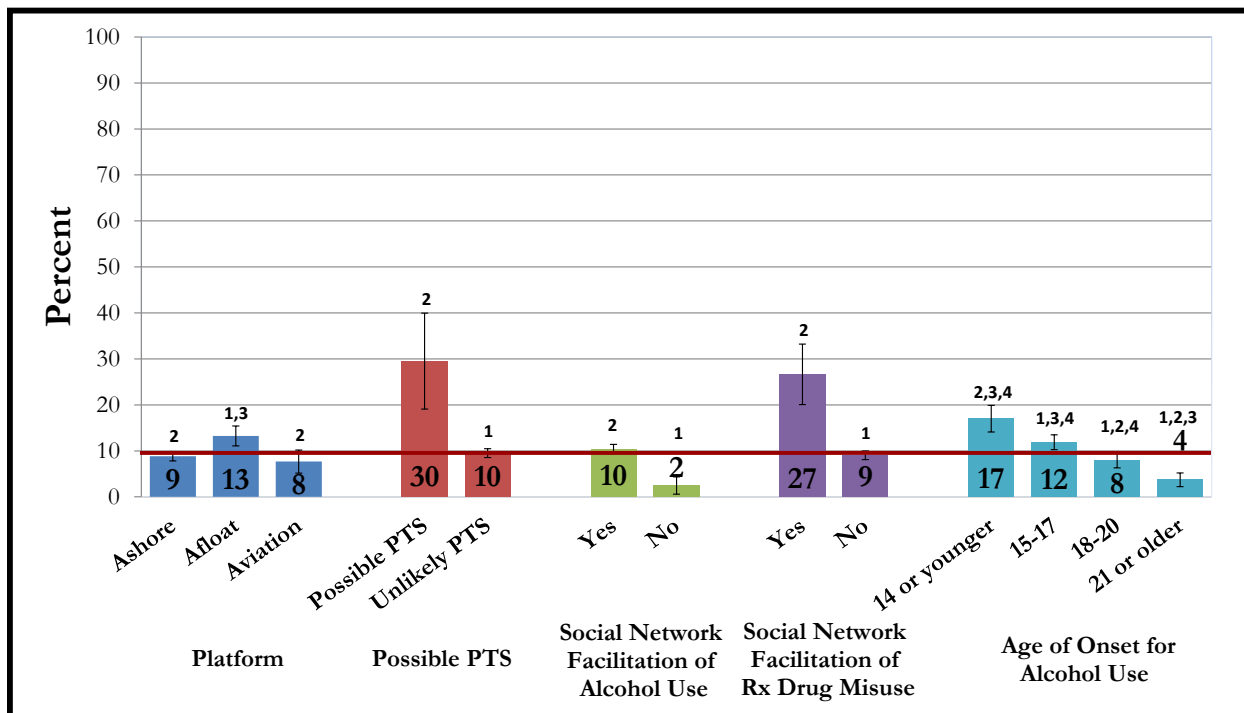
- USCG personnel who were stationed afloat had the highest prevalence rate of hazardous or more severe alcohol use compared to those stationed ashore or aviation (13% vs. 8%-9%).

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of hazardous or more severe alcohol use than those who were classified as unlikely to have PTS (30% vs. 10%).

- Similar to current drinking and heavy alcohol use, those who experienced social network facilitation of alcohol use had a higher prevalence rate of hazardous or more severe alcohol use than those who did not experience social network facilitation of alcohol use (10% vs. 2%).

- USCG personnel who experienced social network facilitation of prescription drug misuse had a higher prevalence rate of hazardous or more severe alcohol use than those who did not experience social network facilitation of prescription drug misuse (27% vs. 9%).

- USCG personnel who initiated alcohol use at age 14 or younger had the highest prevalence rate of hazardous or more severe alcohol use compared to those who initiated alcohol use at age 15 or older (17% vs. 4%-12%).

[5] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

4.1.4 *Serious Consequences*

Respondents were asked 15 items about the frequency of serious consequences associated with alcohol use in the past 12 months such as spending time in jail, having difficulty with the police, finding it difficult to handle problems, and hitting a spouse or significant other as a result of drinking. Response options were on a 4-point scale, ranging from "0 times" to "3 or more times." Response options were recoded into a single dichotomous variable to identify whether or not an individual had experienced at least one serious consequence in the past 12 months. The following presents results on those who reported at least one event that occurred one or more times in the past 12 months.

Approximately 7% of active duty USCG personnel experienced at least one serious consequence related to alcohol use in the past 12 months (see Table 4.1.4). Figure 4.1.E presents the association between serious consequences due to drinking and platform, as well as four variables strongly associated with serious consequences as a result of drinking: age group (i.e., 21-25 years old), being unmarried, heavy alcohol use, and early age of onset for alcohol use.

Figure 4.1.E: Indicators Associated with Serious Consequences[6]
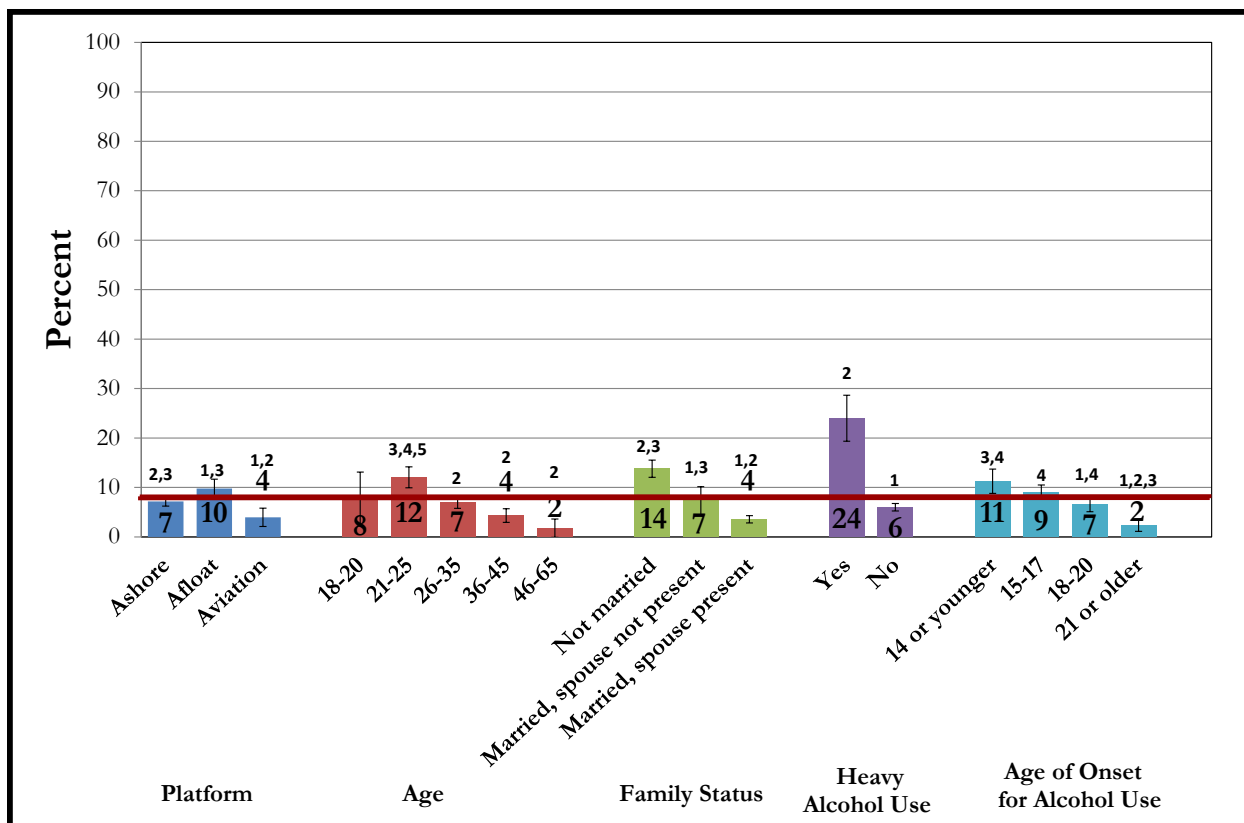
- USCG personnel who were stationed afloat had the highest prevalence rate of serious consequences resulting from alcohol use compared to those stationed ashore or aviation (10% vs. 4%-7%).

- USCG personnel in the 21 to 25 age group had a higher prevalence rate of serious consequences due to drinking than service members 26 years of age and older (12% vs. 2%-7%).

- USCG members who were not married had the highest prevalence rate of serious consequences due to drinking compared to service members who were married with or without a spouse present (14% vs. 4%-7%).

- Heavy alcohol users had a higher prevalence rate of serious consequences related to alcohol use than those who were not heavy alcohol users (24% vs. 6%).

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[6] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- Service members who began drinking at age 21 or older had the lowest prevalence rate of serious consequences due to drinking compared to those who initiated alcohol use at age 20 or younger (2% vs. 7%-11%).

4.1.5 *Work-Related Productivity Loss*

Respondents were asked 11 items about the frequency of alcohol-related work productivity loss in the past 12 months, such as having trouble on the job, not getting promoted because of drinking, or missing work due to a hangover. Response options were on a 4-point scale, ranging from "0 times" to "3 or more times" and were recoded into a single dichotomous variable to identify whether or not an individual had experienced alcohol-related work productivity loss at least once in the past 12 months. The following analyses focus on those who reported at least one event that occurred one or more times in the past 12 months.

Approximately 9% of active duty USCG personnel experienced work-related productivity loss due to drinking in the past 12 months (see Table 4.1.5). Figure 4.1.F presents the relationship between work-related productivity loss due to drinking and platform, along with four variables strongly associated with work-related productivity loss as a result of drinking: age group (i.e., 21-25 year olds), social network facilitation of alcohol use, heavy alcohol use, and age of onset for alcohol use (i.e., 14 years or younger).

Figure 4.1.F: Indicators Associated with Work-Related Productivity Loss[7]
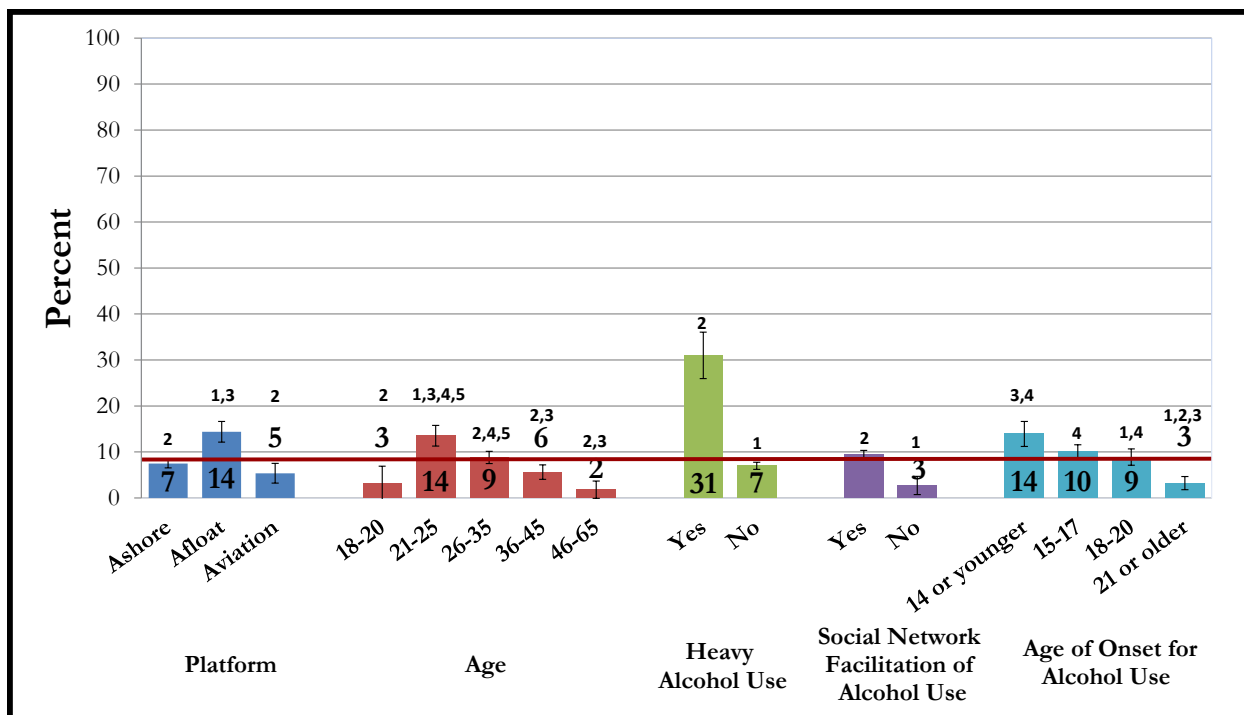
- USCG personnel who were stationed afloat had a higher prevalence rate of work-related productivity loss as a result of drinking compared to those stationed ashore or aviation (14% vs. 5%-7%).

- USCG members who were 21 to 25 years old had the highest prevalence rate of work-related productivity loss due to alcohol consumption compared to the other age groups (14% vs. 2%-9%).

- USCG personnel who were classified as heavy alcohol users had a much higher prevalence rate of productivity loss due to alcohol consumption than those who were not classified as heavy alcohol users (31% vs. 7%).

- Personnel who experienced social network facilitation of alcohol use had a higher prevalence rate of work-related productivity loss due to alcohol use than those who did not experience social network facilitation of alcohol use (9% vs. 3%).

- USCG personnel who initiated alcohol use at age 21 or older had the lowest prevalence rate of work-related productivity loss due to drinking compared to those who initiated alcohol use at age 20 or younger (3% vs. 9%-14%).

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[7] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

4.1.6 *Risk Behaviors*

Respondents were asked 4 items about the frequency of alcohol-related risk behaviors in the past 12 months, such as driving a car or other vehicle or operating power tools or machinery when they had too much to drink. Response options were on a 4-point scale, ranging from "0 times" to "3 or more times" and were recoded into a single dichotomous variable to represent whether a risk behavior had occurred or had not occurred in the past 12 months. The following analyses focus on those who reported at least one risk behavior that occurred one or more times in the past 12 months.

Approximately 10% of active duty USCG personnel engaged in risk behaviors due to drinking in the past 12 months (see Table 4.1.6). Figure 4.1.G presents the relationship between engaging in risk behaviors due to drinking and platform, along with four variables strongly associated with engaging in risk behaviors as a result of drinking: religiosity/spirituality, heavy alcohol use, social network facilitation of alcohol use, and age of onset for alcohol use (i.e., 14 years or younger).

Figure 4.1.G: Indicators Associated with Engaging in Risk Behaviors Due to Alcohol Use[8]
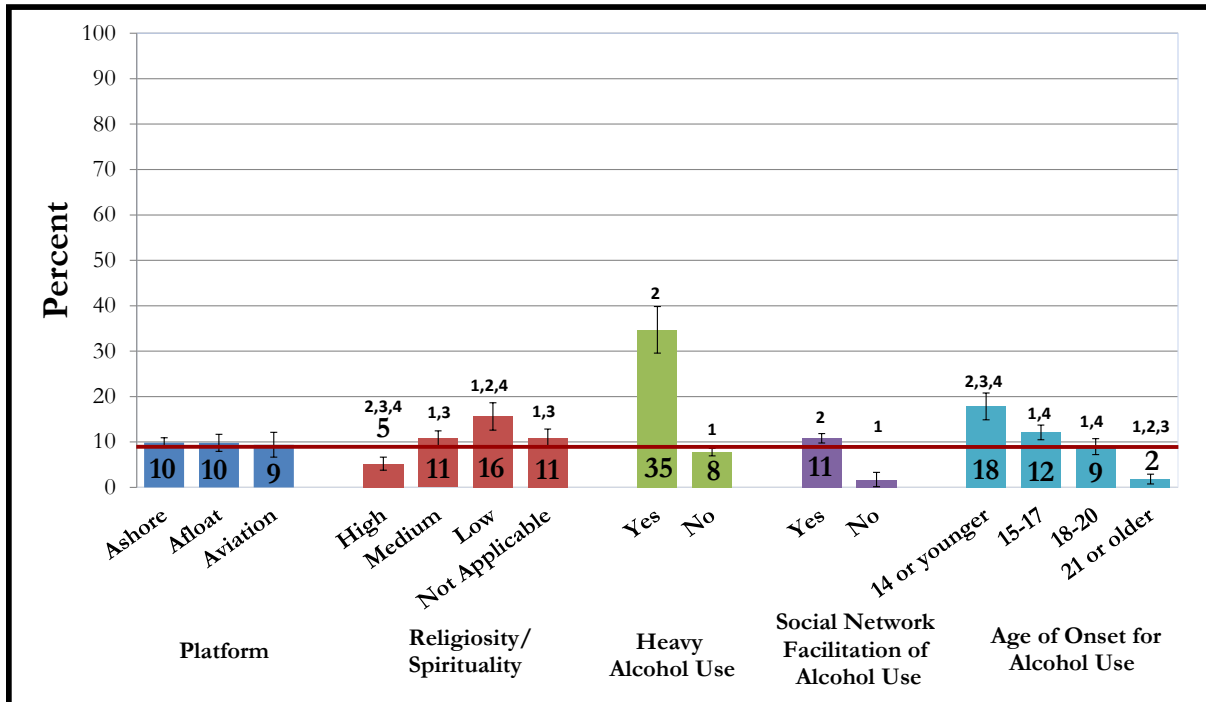
- There were no significant differences in engaging in risk behaviors due to drinking by platform.

- USCG members who reported high religiosity/spirituality had the lowest prevalence rate of engaging in risk behaviors due to drinking compared to those who reported low or medium religiosity/spirituality or indicated religiosity/spirituality was not applicable to them (5% vs. 11%-16%).

- USCG personnel who were classified as heavy alcohol users had a much higher prevalence rate of engaging in risk behaviors due to drinking than those who were not classified as heavy alcohol users (35% vs. 8%).

- Personnel who experienced social network facilitation of alcohol use had a higher prevalence rate of engaging in risk behaviors due to drinking than those who did not experience social network facilitation of alcohol use (11% vs. 2%).

- USCG personnel who initiated alcohol use at age 21 or older had the lowest prevalence rate of engaging in risk behaviors due to drinking compared to those who initiated alcohol use at age 20 or younger (2% vs. 9%-18%).

4.1.7 *Status of Selected Healthy People 2020 Health Promotion Objectives*

We analyzed binge drinking in the past 30 days to assess USCG personnel's progresses towards the *Healthy People 2020 Health Promotion Objectives*, as presented in Table 4.2. Binge drinking was defined as having 5 or more drinks on one occasion for males and 4 or more drinks on one occasion for females. Rates of binge drinking in the USCG, at 39.6%, were much higher than the *Healthy People 2020* objective of 24.4%. A comparison with the civilian estimate reveals that rates of binge drinking in the USCG are also much higher than among civilian adults.

Table 4.2 – Healthy People 2020 Health Promotion Objectives: Alcohol[9]			
Measure	**Healthy People 2020 Objective[10]**	**2011 Civilian Estimate[11]**	**USCG Estimate**
Binge Drinking, Past 30 Days	<24.4%	26.7%	39.6% (0.7)

4.1.8 *Interpretations and Recommendations*

Among USCG personnel, 91% were classified as current drinkers, irrespective of the amount of intake. There were differences in drinking behavior by platform: ashore, afloat, and aviation. The afloat community had the highest prevalence of heavy alcohol use, hazardous or more severe alcohol use, serious consequences as a result of drinking, and work-related productivity loss as a result of drinking. Thus, efforts towards reduction in alcohol consumption can be most effective when targeted at the afloat community.

CG-11 recommends providing the "universal prevention" education *Strong Choices* to members of the afloat community either via the Substance Abuse Prevention Specialist or through the Command Drug and Alcohol Representatives assigned to each vessel. In addition, effective strategies, such as teaching the "Tap Out" program, should used in each afloat Command. CG-11 recommends the development and adherence to fleet-wide alcohol consumption policy. CG-11 also notes that a low risk choice and a successful strategy to reduce alcohol related incidents is that proposed by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and their "Rethinking Drinking" website.[12] A simple way to define responsible drinking is "0,1,2,3" adopted in the USCG Health Promotion Manual, COMDINST 6200.[13] According to this principle, developed by the Prevention Research Institute, responsible drinking can be defined as zero drinks for certain activities, such as

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[9] Note: Table displays the Healthy People 2020 Objective, the civilian estimate for the objective (as presented by the Healthy People data search (http://healthypeople.gov), and the HRB estimate for USCG personnel. The standard error of the USCG estimate is presented in parentheses.

[10] Department of Health and Human Services (2010). *Healthy People 2020,* Retrieved September 2013 from http://healthypeople.gov.

[11] Civilian estimate was from the 2011 National Survey on Drug Use and Health (NSDUH). This survey employs a different methodology than the 2011 HRB. Due to possible differences in measurement error, comparisons should be made with caution.

[12] National Institute on Alcohol Abuse and Alcoholism (n.d.). Rethinking Drinking: Alcohol and Your Health. Retrieved September 20, 2013, from http://rethinkingdrinking.niaaa.nih.gov/.

[13] Department of Homeland Security, United States Coast Guard. Coast Guard Health Promotion Manual: COMDTINST M6200.1B. May 7, 2013.

driving a car, during pregnancy, taking certain medications, or cleaning a weapon; no more than one drink an hour; and two drinks per drinking occasion never exceeding three. Using this principle as a baseline, the Substance Abuse Prevention (SAP) Program endorses the following key behaviors for responsible drinking:[14]

- No alcohol use before the age of 21, except where "Law of the Land" policy allows;

- Always drive sober;

- Consume no more than one "standard alcoholic beverage" per hour;

- Develop a "recognize, prevent, respond" strategy, such as a designated driver program, or a "2-and-through" agreement between command and members (e.g., 2-and-through denotes limiting alcohol consumption to two drinks);

- Consume no more than three standard drinks per day, not exceeding 14 per week for males; one drink per day, not exceeding 7 per week for females;

- Check with a health care provider to ensure it is safe to consume alcohol with prescribed medication; and

- Avoid use of alcohol with any activity requiring strict focus and attention or coordination and balance (e.g., cleaning a weapon, climbing a ladder).

Analyses showed that 21 to 25 year olds had the highest prevalence of work-related productivity loss and serious consequences due to drinking compared to older service members. This highlights the importance of education on the consequences of alcohol use for young drinkers.

Age of onset for alcohol use was among the strongest covariates for five out of the six alcohol-related outcome variables – heavy alcohol use, hazardous or more severe alcohol use, serious consequences resulting from alcohol use, work-related productivity loss due to drinking, and risk behaviors due to drinking. USCG personnel who reported first using alcohol at age 14 or younger had a higher prevalence rate of heavy alcohol use and hazardous or more severe alcohol use than those who began drinking at age 15 or older. Those who reported first using alcohol at age 14 or younger also had higher prevalence rates of serious consequences, work-related productivity loss, and engaging in risk behaviors due to alcohol consumption than service members who began drinking at age 18 or older. Although they started drinking prior to joining the USCG, it may be beneficial to identify members who began drinking alcohol at a young age to help target education on the consequences of alcohol use to those most at risk.

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[14] Department of Homeland Security, United States Coast Guard. Coast Guard Health Promotion Manual: COMDTINST M6200.1B. May 7, 2013.

Social network facilitation of alcohol use was also among the strongest covariates for five out of the six alcohol-related outcomes, including current drinking, heavy alcohol use, hazardous or more severe alcohol use, work-related productivity loss, and engaging in risk behaviors due to alcohol use. These findings suggest that the behavior of peers may influence service members' own substance use behaviors (i.e., if one's peers participate in drinking alcohol, it may appear to be condoned, accepted, and potentially facilitated) and highlight the impact of culture on both alcohol consumption and negative consequences due to alcohol use.

Heavy alcohol use was a very strong covariate for serious consequences, work-related productivity loss, and engaging in risk behaviors due to alcohol consumption; the prevalence rate of serious consequences, productivity loss, and engaging in risk behaviors was four times as high for personnel who were heavy alcohol users than those who were not. This again stresses the importance of efforts to reduce alcohol use.

Two Substance Abuse Workgroups have been seated by the USCG since 2011. CG-11 suggests that the USCG adopt the recommendations made by these two workgroups that received concurrence and begin enacting those principles in both policy and "deck plate" levels to enhance positive cultural change. CG-11 recommends the following:

- Establish a clear quantifiable definition for "Responsible Drinking" (e.g., 0,1,2,3 principle);

- Establish a coherent, congruent policy on Substance Abuse in the Medical Manual, Personnel Manual and the Health Promotions Manual COMDTINST M6200.1B;

- Adopt a "Commanders Need to Know Policy" to assist in reducing stigma and providing Medical Officers clear direction on when and what to report to Commands. This policy will also have direct implications with sexual assault reporting requirements as they relate to restricted and unrestricted reporting;

- Review the recommendations of the Institute of Medicine's "Report to Congress: Substance Use Disorders in the Armed Forces, 2012" and determine what is reasonable for the USCG to accomplish with its resource base;

- Implement and evaluate "myPRIME" as the "specified" and "indicated" prevention education model to cover USCG personnel not assigned to a USCG clinic;

- Create an ongoing "Substance Abuse Steering Committee" that meets quarterly to monitor and address issues as they arise; and

- Remain active in the Addictive Substance Misuse Use Advisory Council to obtain ideas and methods to deal with substance use and prevention within the military.

Tables

The following tables present an in-depth analysis of alcohol use in the USCG.

Table 4.1.1 – Current Drinkers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Total	90.57	(0.43)		
Platform				
Ashore	90.20	(0.54)	0.96	(0.69, 1.33)
Afloat	91.58	(0.88)	1.23	(0.84, 1.78)
Aviation	90.87	(1.35)	1.00	
Gender				
Male	90.63	(0.50)	1.09	(0.85, 1.40)
Female	90.19	(1.20)	1.00	
Pay Grade				
E1-E4	87.94	(0.85) [2,5]	0.49	(0.33, 0.72) *
E5-E6	91.96	(0.66) [1]	0.76	(0.51, 1.14)
E7-E9	90.01	(1.34)	0.67	(0.43, 1.05)
W01-W05	91.24	(2.16)	0.59	(0.34, 1.02)
O1-O3	93.08	(1.25) [1]	0.92	(0.56, 1.52)
O4-O10	92.72	(1.54)	1.00	
Age Group				
18-20	40.35	(5.13) [2,3,4,5]	0.10	(0.06, 0.19) *
21-25	92.71	(0.85) [1,5]	1.96	(1.22, 3.14) *
26-35	92.43	(0.61) [1,5]	1.88	(1.22, 2.92) *
36-45	92.13	(0.91) [1]	1.80	(1.13, 2.89) *
46-65	86.64	(2.38) [1,2,3]	1.00	
Race/Ethnicity				
White, non-Hispanic	90.95	(0.48) [4]	1.00	
African American, non-Hispanic	89.84	(2.00)	0.88	(0.56, 1.37)
Hispanic	90.51	(1.26)	0.95	(0.70, 1.29)
Other	85.28	(2.49) [1]	0.58	(0.38, 0.86) *
Education				
High school or less	86.75	(1.09) [2,3]	0.53	(0.40, 0.71) *
Some college	91.23	(0.57) [1]	0.85	(0.65, 1.10)
College graduate or higher	92.47	(0.79) [1]	1.00	
Family Status				
Not married	90.61	(0.73) [2]	1.07	(0.87, 1.32)
Married, spouse not present	94.76	(1.22) [1,3]	2.01	(1.22, 3.30) *
Married, spouse present	90.01	(0.59) [2]	1.00	

Table 4.1.1 – Current Drinkers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Children Living With You				
Yes	90.55	(0.66)	1.00	
No	90.58	(0.57)	1.00	(0.82, 1.23)
Combat Deployed in Past Year				
Yes	91.27	(2.40)	1.15	(0.63, 2.09)
No	90.08	(0.51)	1.00	
Average Hours of Nightly Sleep				
9+ hours	80.88	(3.50) [2,3]	0.49	(0.31, 0.78) *
7-8 hours	89.61	(0.76) [1]	1.00	
5-6 hours	92.00	(0.72) [1]	1.33	(1.04, 1.71) *
4 hours or less	88.66	(2.95)	0.91	(0.50, 1.64)
Overall Stress in Past 12 Months				
High	91.22	(0.76)	1.24	(0.99, 1.55)
Low	89.36	(0.63)	1.00	
History of Physical Abuse				
Yes	90.89	(1.38)	1.10	(0.78, 1.56)
No	90.05	(0.53)	1.00	
History of Sexual Abuse				
Yes	91.07	(1.35)	1.12	(0.80, 1.59)
No	90.06	(0.53)	1.00	
Risk-Taking				
High Risk Taking	90.05	(1.71)	0.98	(0.66, 1.45)
Low-Moderate Risk Taking	90.22	(0.52)	1.00	
Religiosity/Spirituality				
High	84.52	(1.17) [4]	1.00	
Medium	92.05	(0.75) [4]	2.12	(1.63, 2.77) *
Low	92.78	(1.09) [4]	2.35	(1.64, 3.39) *
Not Applicable	90.82	(0.94) [1,2,3]	1.81	(1.37, 2.40) *
Vigorous Physical Exercise, Past 30 Days				
Yes	90.60	(0.46)	1.00	
No	90.19	(1.55)	0.95	(0.67, 1.37)

Table 4.1.1 – Current Drinkers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Current Smoker						
Yes	94.80	(0.79)	2	2.29	(1.64, 3.18)	*
No	88.85	(0.55)	1	1.00		
Depression						
High	85.60	(2.44)	2	0.63	(0.42, 0.95)	*
Low	90.38	(0.50)	1	1.00		
Anxiety						
High	89.58	(1.48)		0.93	(0.67, 1.30)	
Low	90.22	(0.52)		1.00		
Anger						
High	84.38	(3.30)	2	0.57	(0.35, 0.94)	*
Low	90.44	(0.50)	1	1.00		
Resilience						
Low resilience	77.54	(3.52)	2,3	0.31	(0.20, 0.49)	*
Moderate resilience	90.16	(0.64)	1	0.83	(0.65, 1.07)	
High resilience	91.65	(0.78)	1	1.00		
Possible PTS						
Possible PTS	83.81	(4.31)		0.57	(0.30, 1.06)	
Unlikely PTS	90.16	(0.50)		1.00		
Suicidal Ideation Since Joining Military						
Yes	89.34	(2.94)		0.92	(0.50, 1.69)	
No	90.12	(0.50)		1.00		
Self-Inflicted Injury - Lifetime						
Yes	86.07	(2.00)	2	0.65	(0.46, 0.91)	*
No	90.53	(0.51)	1	1.00		
Positive Coping						
High	90.59	(0.60)		1.12	(0.90, 1.41)	
Low	89.54	(0.85)		1.00		
Avoidance Coping						
High	88.18	(0.90)	2	0.72	(0.58, 0.89)	*
Low	91.22	(0.57)	1	1.00		

Table 4.1.1 – Current Drinkers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Social Network Facilitation - Alcohol						
Yes	91.91	(0.46)	2	6.31	(4.78, 8.31)	*
No	64.31	(2.92)	1	1.00		
Social Network Facilitation - Cigarettes						
Yes	91.66	(0.53)	2	1.87	(1.51, 2.32)	*
No	85.47	(1.07)	1	1.00		
Social Network Facilitation - Smokeless						
Yes	91.95	(0.55)	2	1.78	(1.44, 2.20)	*
No	86.53	(0.90)	1	1.00		
Social Network Facilitation - RxDrugs						
Yes	92.00	(2.06)		1.31	(0.75, 2.28)	
No	89.81	(0.50)		1.00		
Leadership Deterrence - Alcohol						
Yes	91.21	(0.65)	2	1.34	(1.08, 1.65)	*
No	88.58	(0.73)	1	1.00		
Leadership Deterrence - Cigarettes						
Yes	91.20	(0.60)	2	1.39	(1.13, 1.72)	*
No	88.16	(0.81)	1	1.00		
Leadership Deterrence - Smokeless						
Yes	91.34	(0.61)	2	1.42	(1.15, 1.75)	*
No	88.16	(0.78)	1	1.00		
Leadership Deterrence - RxDrugs						
Yes	90.64	(0.49)	2	2.14	(1.57, 2.90)	*
No	81.93	(2.16)	1	1.00		
Age of onset for alcohol use						
14 years old or younger	94.33	(0.91)		0.97	(0.60, 1.58)	
15 to 17 years old	94.61	(0.58)		1.03	(0.68, 1.55)	
18 to 20 years old	95.30	(0.66)		1.19	(0.75, 1.87)	
21 years old or older	94.47	(0.93)		1.00		

Table 4.1.1 – Current Drinkers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Age of onset for tobacco use					
14 years old or younger	93.14	(1.58)		1.92	(1.16, 3.16)	*
15 to 17 years old	94.28	(0.92)	5	2.33	(1.63, 3.33)	*
18 to 20 years old	94.05	(1.00)	5	2.23	(1.54, 3.24)	*
21 years old or older	90.13	(2.08)		1.29	(0.80, 2.07)	
I have never smoked cigarettes	87.63	(0.68)	2,3	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as current drinkers. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting current drinkers; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 HealthRelated Behaviors Survey of Active Duty Military Personnel (Current Drinkers, Q4, Q38, Q39, Q40, Q46, Q47).

Table 4.1.2 – Heavy Alcohol Use – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Total	7.43	(0.40)				
Platform						
Ashore	7.18	(0.50)	[2]	1.34	(0.87, 2.06)	
Afloat	9.85	(0.90)	[1,3]	2.08	(1.31, 3.28)	*
Aviation	5.01	(1.00)	[2]	1.00		
Gender						
Male	7.03	(0.41)	[2]	0.53	(0.41, 0.68)	*
Female	10.85	(1.26)	[1]	1.00		
Pay Grade						
E1-E4	8.33	(0.72)		1.72	(1.06, 2.77)	*
E5-E6	7.98	(0.66)		1.70	(1.06, 2.72)	*
E7-E9	8.11	(1.22)		1.83	(1.08, 3.08)	*
W01-W05	5.83	(1.79)		1.29	(0.64, 2.58)	
O1-O3	4.82	(1.06)		0.90	(0.49, 1.65)	
O4-O10	4.99	(1.29)		1.00		
Age Group						
18-20	3.80	(2.00)		0.40	(0.12, 1.27)	
21-25	9.19	(0.94)	[4]	1.01	(0.60, 1.71)	
26-35	7.58	(0.61)		0.82	(0.50, 1.36)	
36-45	5.58	(0.78)	[2]	0.59	(0.34, 1.03)	
46-65	9.08	(2.01)		1.00		
Race/Ethnicity						
White, non-Hispanic	7.69	(0.45)		1.00		
African American, non-Hispanic	7.43	(1.73)		0.96	(0.58, 1.60)	
Hispanic	8.13	(1.18)		1.06	(0.76, 1.48)	
Other	4.69	(1.49)		0.59	(0.31, 1.15)	
Education						
High school or less	9.00	(0.92)	[3]	1.75	(1.24, 2.46)	*
Some college	7.96	(0.55)	[3]	1.53	(1.13, 2.06)	*
College graduate or higher	5.36	(0.68)	[1,2]	1.00		
Family Status						
Not married	9.58	(0.74)	[3]	1.58	(1.25, 1.98)	*
Married, spouse not present	7.73	(1.46)		1.24	(0.81, 1.91)	
Married, spouse present	6.30	(0.48)	[1]	1.00		

Table 4.1.2 – Heavy Alcohol Use – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Children Living With You						
Yes	5.23	(0.51)	[2]	1.00		
No	9.29	(0.57)	[1]	1.86	(1.46, 2.36)	*
Combat Deployed in Past Year						
Yes	5.80	(1.99)		0.75	(0.37, 1.55)	
No	7.55	(0.45)		1.00		
Average Hours of Nightly Sleep						
9+ hours	3.58	(1.65)		0.49	(0.19, 1.27)	
7-8 hours	7.06	(0.64)		1.00		
5-6 hours	8.34	(0.73)		1.20	(0.92, 1.57)	
4 hours or less	10.54	(2.85)		1.55	(0.83, 2.89)	
Overall Stress in Past 12 Months						
High	10.64	(0.83)	[2]	1.98	(1.55, 2.53)	*
Low	5.66	(0.47)	[1]	1.00		
History of Physical Abuse						
Yes	10.63	(1.47)	[2]	1.55	(1.12, 2.17)	*
No	7.11	(0.45)	[1]	1.00		
History of Sexual Abuse						
Yes	9.67	(1.40)		1.38	(0.98, 1.94)	
No	7.21	(0.45)		1.00		
Risk-Taking						
High Risk Taking	13.13	(1.93)	[2]	2.04	(1.43, 2.92)	*
Low-Moderate Risk Taking	6.88	(0.44)	[1]	1.00		
Religiosity/Spirituality						
High	4.05	(0.64)	[1,2,3]	1.00		
Medium	7.65	(0.73)	[4]	1.96	(1.34, 2.88)	*
Low	11.02	(1.32)	[4]	2.94	(1.94, 4.45)	*
Not Applicable	8.44	(0.90)	[4]	2.19	(1.47, 3.25)	*
Vigorous Physical Exercise, Past 30 Days						
Yes	7.04	(0.40)	[2]	1.00		
No	11.92	(1.69)	[1]	1.79	(1.27, 2.50)	*
Current Smoker						
Yes	15.38	(1.28)	[2]	3.01	(2.36, 3.84)	*
No	5.69	(0.41)	[1]	1.00		

Table 4.1.2 – Heavy Alcohol Use – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Depression						
High	16.42	(2.57)	[2]	2.62	(1.77, 3.86)	*
Low	6.98	(0.43)	[1]	1.00		
Anxiety						
High	15.28	(1.74)	[2]	2.64	(1.96, 3.56)	*
Low	6.40	(0.43)	[1]	1.00		
Anger						
High	14.22	(0.44)	[2]	2.13	(1.26, 3.59)	*
Low	7.23	(3.17)	[1]	1.00		
Resilience						
Low resilience	11.41	(2.68)		1.80	(1.02, 3.16)	*
Moderate resilience	7.50	(0.57)		1.13	(0.86, 1.49)	
High resilience	6.70	(0.71)		1.00		
Possible PTS						
Possible PTS	20.48	(4.72)	[2]	3.29	(1.85, 5.87)	*
Unlikely PTS	7.25	(0.43)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	16.02	(3.49)	[2]	2.47	(1.46, 4.16)	*
No	7.17	(0.43)	[1]	1.00		
Self-Inflicted Injury - Lifetime						
Yes	13.69	(1.99)	[2]	2.13	(1.49, 3.04)	*
No	6.94	(0.44)	[1]	1.00		
Positive Coping						
High	7.02	(0.52)		0.80	(0.63, 1.03)	
Low	8.59	(0.77)		1.00		
Avoidance Coping						
High	9.88	(0.84)	[2]	1.66	(1.29, 2.12)	*
Low	6.21	(0.49)	[1]	1.00		
Social Network Facilitation - Alcohol						
Yes	7.94	(0.45)	[2]	4.22	(1.79, 9.95)	*
No	2.00	(0.85)	[1]	1.00		

Table 4.1.2 – Heavy Alcohol Use – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Social Network Facilitation - Cigarettes						
Yes	9.06	(0.55)	[2]	2.72	(1.92, 3.86)	*
No	3.53	(0.56)	[1]	1.00		
Social Network Facilitation - Smokeless						
Yes	8.77	(0.58)	[2]	1.68	(1.28 2.20)	*
No	5.41	(0.60)	[1]	1.00		
Social Network Facilitation - RxDrugs						
Yes	19.20	(2.99)	[2]	3.17	(2.13, 4.73)	*
No	6.96	(0.42)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	6.82	(0.58)		0.82	(0.64, 1.05)	
No	8.19	(0.63)		1.00		
Leadership Deterrence - Cigarettes						
Yes	7.67	(0.57)		1.06	(0.83, 1.36)	*
No	7.25	(0.65)		1.00		
Leadership Deterrence - Smokeless						
Yes	7.47	(0.57)		0.99	(0.78, 1.26)	
No	7.55	(0.64)		1.00		
Leadership Deterrence - RxDrugs						
Yes	7.71	(0.45)		1.60	(0.95, 2.70)	
No	4.95	(1.21)		1.00		
Age of onset for alcohol use						
14 years old or younger	12.87	(1.32)	[2,3,4]	3.74	(2.32, 6.03)	*
15 to 17 years old	9.04	(0.73)	[1,3,4]	2.52	(1.60, 3.95)	*
18 to 20 years old	5.65	(0.72)	[1,2]	1.52	(0.93, 2.49)	
21 years old or older	3.80	(0.78)	[1,2]	1.00		
Age of onset for tobacco use						
14 years old or younger	16.70	(2.34)	[3,5]	3.57	(2.46, 5.20)	*
15 to 17 years old	11.21	(1.26)	[5]	2.25	(1.66, 3.05)	*
18 to 20 years old	8.00	(1.15)	[1]	1.55	(1.09, 2.21)	*
21 years old or older	10.69	(2.16)	[5]	2.13	(1.32, 3.43)	*
I have never smoked cigarettes	5.31	(0.46)	[1,2,4]	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as heavy alcohol users. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting heavy alcohol use; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 HealthRelated Behaviors Survey of Active Duty Military Personnel (Heavy Alcohol Use, Past 12 Months, Q4, Q38, Q39, Q40, Q46, Q47).

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	9.70	(0.45)			
Platform					
Ashore	8.86	(0.52)	[2]	1.12	(0.79, 1.61)
Afloat	13.26	(1.10)	[1,3]	1.77	(1.21, 2.60) *
Aviation	7.69	(1.28)	[2]	1.00	
Gender					
Male	10.22	(0.49)	[2]	1.61	(1.19, 2.18) *
Female	6.43	(1.00)	[1]	1.00	
Pay Grade					
E1-E4	11.81	(0.86)		1.73	(1.15, 2.60) *
E5-E6	9.17	(0.71)		1.24	(0.83, 1.86)
E7-E9	9.00	(1.31)		1.23	(0.77, 1.95)
W01-W05	9.11	(2.22)		1.08	(0.59, 1.99)
O1-O3	7.41	(1.30)		1.08	(0.65, 1.78)
O4-O10	7.01	(1.55)		1.00	
Age Group					
18-20	5.19	(2.32)		0.65	(0.22, 1.86)
21-25	13.29	(1.13)	[3,4]	1.81	(1.04, 3.16) *
26-35	9.54	(0.69)	[2]	1.25	(0.72, 2.15)
36-45	7.75	(0.92)	[2]	0.99	(0.56, 1.77)
46-65	7.80	(1.92)		1.00	
Race/Ethnicity					
White, non-Hispanic	10.11	(0.52)		1.00	
African American, non-Hispanic	10.66	(2.08)		1.06	(0.68, 1.65)
Hispanic	8.43	(1.21)		0.82	(0.59, 1.13)
Other	6.77	(1.83)		0.65	(0.36, 1.15)
Education					
High school or less	11.64	(1.05)		1.40	(1.05, 1.87) *
Some college	9.43	(0.60)		1.11	(0.86, 1.43)
College graduate or higher	8.60	(0.86)		1.00	
Family Status					
Not married	12.81	(0.85)	[3]	1.77	(1.44, 2.18) *
Married, spouse not present	11.04	(1.75)		1.50	(1.03, 2.18) *
Married, spouse present	7.66	(0.53)	[1]	1.00	

Table 4.1.3 – Hazardous or More Severe Alcohol Use – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Children Living With You						
Yes	7.31	(0.60)	[2]	1.00		
No	11.49	(0.64)	[1]	1.65	(1.33, 2.04)	*
Combat Deployed in Past Year						
Yes	12.09	(2.78)		1.28	(0.76, 2.16)	
No	9.69	(0.50)		1.00		
Average Hours of Nightly Sleep						
9+ hours	8.45	(2.49)		0.94	(0.49, 1.81)	
7-8 hours	8.93	(0.71)		1.00		
5-6 hours	10.66	(0.82)		1.22	(0.96, 1.55)	
4 hours or less	12.81	(3.12)		1.50	(0.85, 2.66)	
Overall Stress in Past 12 Months						
High	13.83	(0.93)	[2]	1.94	(1.56, 2.41)	*
Low	7.64	(0.55)	[1]	1.00		
History of Physical Abuse						
Yes	13.70	(1.64)	[2]	1.53	(1.14, 2.06)	*
No	9.39	(0.51)	[1]	1.00		
History of Sexual Abuse						
Yes	11.23	(1.49)		1.18	(0.86, 1.62)	
No	9.67	(0.52)		1.00		
Risk-Taking						
High Risk Taking	16.80	(2.14)	[2]	1.99	(1.44, 2.75)	*
Low-Moderate Risk Taking	9.20	(0.51)	[1]	1.00		
Religiosity/Spirituality						
High	5.92	(0.77)	[2,3,4]	1.00		
Medium	10.46	(0.85)	[1]	1.86	(1.34, 2.57)	*
Low	13.64	(1.45)	[1]	2.51	(1.75, 3.61)	*
Not Applicable	10.84	(1.01)	[1]	1.93	(1.38, 2.71)	*
Vigorous Physical Exercise, Past 30 Days						
Yes	9.44	(0.47)		1.00		
No	11.77	(1.71)		1.28	(0.91, 1.80)	

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Current Smoker						
Yes	16.86	(1.32)	[2]	2.31	(1.84, 2.89)	*
No	8.08	(0.48)	[1]	1.00		
Depression						
High	21.24	(2.84)	[2]	2.66	(1.87, 3.78)	*
Low	9.21	(0.49)	[1]	1.00		
Anxiety						
High	20.24	(1.95)	[2]	2.74	(2.10, 3.57)	*
Low	8.48	(0.49)	[1]	1.00		
Anger						
High	21.69	(3.74)	[2]	2.65	(1.70, 4.14)	*
Low	9.46	(0.50)	[1]	1.00		
Resilience						
Low resilience	8.56	(2.38)		1.10	(0.58, 2.05)	
Moderate resilience	10.80	(0.67)	[3]	1.42	(1.11, 1.81)	*
High resilience	7.87	(0.76)	[2]	1.00		
Possible PTS						
Possible PTS	29.53	(5.33)	[2]	3.98	(2.39, 6.64)	*
Unlikely PTS	9.51	(0.49)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	18.41	(3.71)	[2]	2.13	(1.30, 3.50)	*
No	9.57	(0.49)	[1]	1.00		
Self-Inflicted Injury - Lifetime						
Yes	17.60	(2.21)	[2]	2.12	(1.54, 2.92)	*
No	9.17	(0.50)	[1]	1.00		
Positive Coping						
High	8.92	(0.59)	[2]	0.74	(0.60, 0.93)	*
Low	11.66	(0.89)	[1]	1.00		
Avoidance Coping						
High	12.86	(0.94)	[2]	1.60	(1.29, 1.99)	*
Low	8.45	(0.57)	[1]	1.00		

Table 4.1.3 – Hazardous or More Severe Alcohol Use – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Social Network Facilitation - Alcohol						
Yes	10.41	(0.51)	[2]	4.59	(2.10, 10.02)	*
No	2.47	(0.95)	[1]	1.00		
Social Network Facilitation - Cigarettes						
Yes	11.48	(0.61)	[2]	2.19	(1.65, 2.92)	*
No	5.59	(0.70)	[1]	1.00		
Social Network Facilitation - Smokeless						
Yes	11.30	(0.65)	[2]	1.63	(1.29, 2.07)	*
No	7.24	(0.69)	[1]	1.00		
Social Network Facilitation - RxDrugs						
Yes	26.64	(3.36)	[2]	3.65	(2.56, 5.21)	*
No	9.04	(0.48)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	7.63	(0.61)	[2]	0.60	(0.48, 0.74)	*
No	12.16	(0.75)	[1]	1.00		
Leadership Deterrence - Cigarettes						
Yes	8.87	(0.61)	[2]	0.77	(0.62, 0.95)	*
No	11.26	(0.79)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	8.48	(0.61)	[2]	0.70	(0.57, 0.87)	*
No	11.69	(0.78)	[1]	1.00		
Leadership Deterrence - RxDrugs						
Yes	9.80	(0.51)		0.89	(0.61, 1.29)	
No	10.89	(1.75)		1.00		
Age of onset for alcohol use						
14 years old or younger	17.00	(1.48)	[2,3,4]	5.31	(3.32, 8.48)	*
15 to 17 years old	11.89	(0.83)	[1,3,4]	3.50	(2.23, 5.48)	*
18 to 20 years old	7.99	(0.85)	[1,2,4]	2.25	(1.39, 3.63)	*
21 years old or older	3.71	(0.77)	[1,2,3]	1.00		

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Age of onset for tobacco use					
14 years old or younger	19.02	(2.46)	[5]	3.14	(2.21, 4.46)	*
15 to 17 years old	13.69	(1.37)	[5]	2.12	(1.61, 2.80)	*
18 to 20 years old	12.88	(1.41)	[5]	1.98	(1.47, 2.65)	*
21 years old or older	11.59	(2.24)		1.75	(1.11, 2.77)	*
I have never smoked cigarettes	6.96	(0.52)	[1,2,3]	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as hazardous or more severe alcohol users in terms of AUDIT score (AUDIT Score ≥ 8). The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting hazardous or more severe alcohol use; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 HealthRelated Behaviors Survey of Active Duty Military Personnel (Hazardous or More Severe Alcohol Use, Q46, Q47, Q48A-F, Q49A-B).

Table 4.1.4 – Serious Consequences – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Total	7.4	(0.40)				
Platform						
Ashore	7.17	(0.48)	2,3	1.81	(1.12, 2.93)	*
Afloat	9.78	(0.96)	1,3	2.44	(1.47, 4.04)	*
Aviation	3.97	(0.94)	1,2	1.00		
Gender						
Male	8.83	(0.42)		0.89	(0.67, 1.19)	
Female	7.20	(1.17)		1.00		
Pay Grade						
E1-E4	11.71	(0.86)	2,3,4,5,6	3.53	(2.05, 6.07)	*
E5-E6	6.21	(0.60)	1	1.81	(1.04, 3.14)	*
E7-E9	3.41	(0.84)	1	1.24	(0.65, 2.37)	
W01-W05	3.93	(1.52)	1	0.86	(0.35, 2.15)	
O1-O3	6.00	(1.20)	1	1.70	(0.89, 3.23)	
O4-O10	3.86	(1.17)	1	1.00		
Age Group						
18-20	7.64	(2.79)		4.61	(1.23, 17.22)	*
21-25	12.05	(1.09)	3,4,5	7.64	(2.57, 22.69)	*
26-35	6.96	(0.60)	2	4.17	(1.41, 12.34)	*
36-45	4.31	(0.70)	2	2.51	(0.82, 7.71)	
46-65	1.76	(0.95)	2	1.00		
Race/Ethnicity						
White, non-Hispanic	7.72	(0.46)		1.00		
African American, non-Hispanic	6.83	(1.74)		0.88	(0.51, 1.52)	
Hispanic	7.97	(1.19)		1.04	(0.74, 1.46)	
Other	2.67	(1.18)		0.33	(0.13, 0.80)	*
Education						
High school or less	8.70	(0.92)		1.32	(0.95, 1.85)	
Some college	7.23	(0.54)		1.08	(0.81, 1.44)	
College graduate or higher	6.71	(0.77)		1.00		
Family Status						
Not married	13.81	(0.89)	2,3	4.33	(3.35, 5.60)	*
Married, spouse not present	7.30	(1.47)	1,3	2.13	(1.32, 3.42)	*
Married, spouse present	3.57	(0.37)	1,2	1.00		

Table 4.1.4 – Serious Consequences – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Children Living With You					
Yes	3.31	(0.42)	[2]	1.00	
No	10.49	(0.62)	[1]	3.43	(2.57, 4.56) *
Combat Deployed in Past Year					
Yes	9.08	(2.45)		1.29	(0.71, 2.34)
No	7.17	(0.44)		1.00	
Average Hours of Nightly Sleep					
9+ hours	5.98	(2.14)		0.93	(0.43, 2.00)
7-8 hours	6.43	(0.62)		1.00	
5-6 hours	7.88	(0.72)		1.24	(0.94, 1.65)
4 hours or less	8.52	(2.66)		1.35	(0.68, 2.72)
Overall Stress in Past 12 Months					
High	10.00	(0.82)	[2]	1.84	(1.43, 2.37) *
Low	5.69	(0.48)	[1]	1.00	
History of Physical Abuse					
Yes	10.12	(1.46)	[2]	1.54	(1.10, 2.18) *
No	6.79	(0.45)	[1]	1.00	
History of Sexual Abuse					
Yes	10.45	(1.46)	[2]	1.61	(1.15, 2.26) *
No	6.74	(0.45)	[1]	1.00	
Risk-Taking					
High Risk Taking	14.35	(2.03)	[2]	2.41	(1.70, 3.43) *
Low-Moderate Risk Taking	6.50	(0.44)	[1]	1.00	
Religiosity/Spirituality					
High	5.18	(0.73)	[3]	1.00	
Medium	7.37	(0.73)	[3]	1.46	(1.02, 2.09) *
Low	11.50	(1.36)	[1,2,4]	2.38	(1.61, 3.52) *
Not Applicable	6.54	(0.81)	[3]	1.28	(0.87, 1.90)
Vigorous Physical Exercise, Past 30 Days					
Yes	7.40	(0.42)		1.00	
No	7.00	(1.35)		0.94	(0.62, 1.44)
Heavy Alcohol Use, Past 12 Months					
Yes	24.29	(2.37)	[2]	5.01	(3.77, 6.65) *
No	6.02	(0.38)	[1]	1.00	

Table 4.1.4 – Serious Consequences – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Current Smoker						
Yes	11.70	(1.15)	[2]	1.99	(1.53, 2.58)	*
No	6.26	(0.43)	[1]	1.00		
Depression						
High	12.05	(2.27)	[2]	1.88	(1.21, 2.91)	*
Low	6.80	(0.43)	[1]	1.00		
Anxiety						
High	13.04	(1.65)	[2]	2.19	(1.60, 3.02)	*
Low	6.40	(0.43)	[1]	1.00		
Anger						
High	17.47	(3.50)	[2]	2.90	(1.77, 4.75)	*
Low	6.80	(0.43)	[1]	1.00		
Resilience						
Low resilience	9.60	(2.54)		1.74	(0.94, 3.24)	
Moderate resilience	7.97	(0.59)	[3]	1.42	(1.07, 1.90)	*
High resilience	5.74	(0.67)	[2]	1.00		
Possible PTS						
Possible PTS	24.06	(5.01)	[2]	4.27	(2.46, 7.40)	*
Unlikely PTS	6.91	(0.43)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	14.29	(3.40)	[2]	2.23	(1.28, 3.90)	*
No	6.94	(0.43)	[1]	1.00		
Self-Inflicted Injury - Lifetime						
Yes	19.24	(2.31)	[2]	3.67	(2.66, 5.08)	*
No	6.09	(0.42)	[1]	1.00		
Positive Coping						
High	7.57	(0.55)		1.16	(0.89, 1.52)	
Low	6.60	(0.69)		1.00		
Avoidance Coping						
High	11.64	(0.91)	[2]	2.57	(1.99, 3.32)	*
Low	4.88	(0.44)	[1]	1.00		

Table 4.1.4 – Serious Consequences – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Social Network Facilitation - Alcohol					
Yes	7.64	(0.45)	[2]	2.68	(1.30, 5.51)	*
No	2.99	(1.05)	[1]	1.00		
Social Network Facilitation - Cigarettes					
Yes	8.74	(0.54)	[2]	2.59	(1.82, 3.69)	*
No	3.56	(0.57)	[1]	1.00		
Social Network Facilitation - Smokeless					
Yes	8.14	(0.56)	[2]	1.41	(1.08, 1.84)	*
No	5.91	(0.63)	[1]	1.00		
Social Network Facilitation - RxDrugs					
Yes	19.49	(3.08)	[2]	3.35	(2.23, 5.03)	*
No	6.74	(0.42)	[1]	1.00		
Leadership Deterrence - Alcohol					
Yes	6.35	(0.57)	[2]	0.76	(0.59, 0.97)	*
No	8.20	(0.64)	[1]	1.00		
Leadership Deterrence - Cigarettes					
Yes	6.54	(0.53)	[2]	0.78	(0.61, 0.99)	*
No	8.28	(0.69)	[1]	1.00		
Leadership Deterrence - Smokeless					
Yes	6.68	(0.55)		0.82	(0.64, 1.05)	
No	8.03	(0.66)		1.00		
Leadership Deterrence - RxDrugs					
Yes	7.20	(0.44)		0.90	(0.58, 1.39)	
No	7.93	(1.53)		1.00		
Age of onset for alcohol use					
14 years old or younger	11.25	(1.26)	[3,4]	5.26	(2.92, 9.46)	*
15 to 17 years old	9.06	(0.74)	[4]	4.13	(2.36, 7.24)	*
18 to 20 years old	6.65	(0.79)	[1,4]	2.95	(1.64, 5.32)	*
21 years old or older	2.35	(0.63)	[1,2,3]	1.00		

Table 4.1.4 – Serious Consequences – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Age of onset for tobacco use					
14 years old or younger	10.97	(1.99)	[5]	2.00	(1.29, 3.08) *
15 to 17 years old	7.84	(1.08)		1.38	(0.98, 1.94)
18 to 20 years old	10.21	(1.30)	[5]	1.84	(1.33, 2.56) *
21 years old or older	10.97	(2.20)	[5]	2.00	(1.24, 3.21) *
I have never smoked cigarettes	5.81	(0.49)	[1,3,4]	1.00	

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, whose drinking led to at least one serious consequence in the past 12 months. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting serious consequences; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 HealthRelated Behaviors Survey of Active Duty Military Personnel (Serious Consequences, Q43A-B, Q43D-E, Q43I-M, Q44C, Q44F-H, Q44J-K).

Table 4.1.5 – Work-Related Productivity Loss – Prevalence Rates and Odds Ratios						
	USCG					
Characteristic[a]	**Prevalence**			**Odds Ratio**[b] **(95% CI)**		
Total	8.78	(0.43)				
Platform						
Ashore	7.49	(0.49)	[2]	1.36	(0.90, 2.07)	
Afloat	14.38	(1.15)	[1,3]	2.77	(1.79, 4.28)	*
Aviation	5.37	(1.09)	[2]	1.00		
Gender						
Male	8.73	(0.46)		0.88	(0.67, 1.14)	
Female	9.11	(1.18)		1.00		
Pay Grade						
E1-E4	12.17	(0.88)	[2,4,6]	1.87	(1.20, 2.90)	*
E5-E6	7.17	(0.64)	[1]	1.14	(0.73, 1.77)	
E7-E9	7.70	(1.23)		1.17	(0.71, 1.94)	
W01-W05	2.77	(1.29)	[1]	0.55	(0.24, 1.25)	
O1-O3	9.21	(1.46)		1.50	(0.90, 2.49)	
O4-O10	5.81	(1.44)	[1]	1.00		
Age Group						
18-20	3.23	(1.87)	[2]	1.82	(0.38, 8.87)	
21-25	13.54	(1.15)	[1,3,4,5]	8.56	(2.89, 25.36)	*
26-35	8.81	(0.67)	[2,4,5]	5.28	(1.79, 15.57)	*
36-45	5.62	(0.80)	[2,3]	3.26	(1.07, 9.87)	*
46-65	1.80	(0.96)	[2,3]	1.00		
Race/Ethnicity						
White, non-Hispanic	8.90	(0.49)		1.00		
African American, non-Hispanic	8.77	(1.94)		0.98	(0.60, 1.60)	
Hispanic	9.43	(1.28)		1.06	(0.78, 1.46)	
Other	5.76	(1.72)		0.63	(0.33, 1.17)	
Education						
High school or less	9.22	(0.95)		1.14	(0.83, 1.56)	
Some college	8.87	(0.59)		1.09	(0.84, 1.42)	
College graduate or higher	8.19	(0.85)		1.00		
Family Status						
Not married	13.41	(0.88)	[3]	2.49	(1.99, 3.11)	*
Married, spouse not present	9.62	(1.67)	[3]	1.71	(1.13, 2.58)	*
Married, spouse present	5.85	(0.47)	[1,2]	1.00		

Table 4.1.5 – Work-Related Productivity Loss – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Children Living With You						
Yes	5.25	(0.52)	[2]	1.00		
No	11.43	(0.64)	[1]	2.33	(1.83, 2.96)	*
Combat Deployed in Past Year						
Yes	9.49	(2.53)		1.10	(0.61, 1.99)	
No	8.67	(0.48)		1.00		
Average Hours of Nightly Sleep						
9+ hours	2.89	(1.51)	[1]	0.33	(0.11, 0.96)	*
7-8 hours	8.29	(0.70)		1.00		
5-6 hours	8.85	(0.76)		1.08	(0.83, 1.39)	
4 hours or less	13.99	(3.31)	[4]	1.80	(1.02, 3.17)	*
Overall Stress in Past 12 Months						
High	11.41	(0.87)	[2]	1.63	(1.30, 2.05)	*
Low	7.32	(0.54)	[1]	1.00		
History of Physical Abuse						
Yes	12.67	(1.60)	[2]	1.61	(1.18, 2.19)	*
No	8.28	(0.49)	[1]	1.00		
History of Sexual Abuse						
Yes	11.92	(1.54)	[2]	1.48	(1.08, 2.03)	*
No	8.36	(0.49)	[1]	1.00		
Risk-Taking						
High Risk Taking	14.74	(2.06)	[2]	1.93	(1.37, 2.72)	*
Low-Moderate Risk Taking	8.23	(0.49)	[1]	1.00		
Religiosity/Spirituality						
High	5.63	(0.76)	[1,2,3]	1.00		
Medium	10.03	(0.84)	[4]	1.87	(1.34, 2.61)	*
Low	10.66	(1.32)	[4]	2.00	(1.35, 2.96)	*
Not Applicable	9.29	(0.95)	[4]	1.72	(1.20, 2.46)	*
Vigorous Physical Exercise, Past 30 Days						
Yes	8.73	(0.46)		1.00		
No	8.27	(1.46)		0.94	(0.64, 1.40)	
Heavy Alcohol Use, Past 12 Months						
Yes	30.63	(2.57)	[2]	5.89	(4.51, 7.69)	*
No	6.97	(0.40)	[1]	1.00		

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Current Smoker						
Yes	16.53	(1.33)	[2]	2.64	(2.09, 3.34)	*
No	6.97	(0.46)	[1]	1.00		
Depression						
High	13.58	(2.42)	[2]	1.70	(1.12, 2.59)	*
Low	8.45	(0.48)	[1]	1.00		
Anxiety						
High	15.91	(1.80)	[2]	2.23	(1.66, 2.99)	*
Low	7.81	(0.48)	[1]	1.00		
Anger						
High	17.84	(3.54)	[2]	2.33	(1.43, 3.79)	*
Low	8.52	(0.48)	[1]	1.00		
Resilience						
Low resilience	8.03	(2.35)		1.09	(0.56, 2.10)	
Moderate resilience	9.54	(0.64)		1.31	(1.01, 1.70)	*
High resilience	7.43	(0.75)		1.00		
Possible PTS						
Possible PTS	16.68	(4.43)	[2]	2.12	(1.13, 3.98)	*
Unlikely PTS	8.64	(0.48)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	12.35	(3.19)		1.48	(0.82, 2.66)	
No	8.69	(0.48)		1.00		
Self-Inflicted Injury - Lifetime						
Yes	19.68	(2.34)	[2]	2.87	(2.09, 3.93)	*
No	7.88	(0.47)	[1]	1.00		
Positive Coping						
High	9.04	(0.60)		1.07	(0.84, 1.36)	
Low	8.49	(0.78)		1.00		
Avoidance Coping						
High	13.23	(0.96)	[2]	2.15	(1.70, 2.70)	*
Low	6.63	(0.51)	[1]	1.00		

Table 4.1.5 – Work-Related Productivity Loss – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Social Network Facilitation - Alcohol						
Yes	9.36	(0.49)	[2]	3.71	(1.74, 7.93)	*
No	2.71	(1.01)	[1]	1.00		
Social Network Facilitation - Cigarettes						
Yes	10.55	(0.59)	[2]	2.45	(1.79, 3.36)	*
No	4.59	(0.65)	[1]	1.00		
Social Network Facilitation - Smokeless						
Yes	10.00	(0.62)	[2]	1.48	(1.16, 1.90)	*
No	6.97	(0.68)	[1]	1.00		
Social Network Facilitation - RxDrugs						
Yes	22.45	(3.21)	[2]	3.22	(2.20, 4.71)	*
No	8.25	(0.46)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	7.34	(0.61)	[2]	0.68	(0.54, 0.85)	*
No	10.47	(0.71)	[1]	1.00		
Leadership Deterrence - Cigarettes						
Yes	7.66	(0.57)	[2]	0.70	(0.56, 0.88)	*
No	10.53	(0.78)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	7.62	(0.59)	[2]	0.70	(0.56, 0.88)	*
No	10.48	(0.75)	[1]	1.00		
Leadership Deterrence - RxDrugs						
Yes	8.91	(0.49)		1.13	(0.74, 1.73)	
No	7.96	(1.53)		1.00		
Age of onset for alcohol use						
14 years old or younger	13.92	(1.38)	[3,4]	4.86	(2.92, 8.08)	*
15 to 17 years old	10.04	(0.77)	[4]	3.35	(2.06, 5.45)	*
18 to 20 years old	8.90	(0.90)	[1,4]	2.93	(1.77, 4.86)	*
21 years old or older	3.22	(0.73)	[1,2,3]	1.00		

Table 4.1.5 – Work-Related Productivity Loss – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Age of onset for tobacco use					
14 years old or younger	16.68	(2.38)	[5]	2.83	(1.95, 4.11)	*
15 to 17 years old	10.23	(1.22)	[5]	1.61	(1.18, 2.19)	*
18 to 20 years old	11.79	(1.38)	[5]	1.89	(1.39, 2.56)	*
21 years old or older	12.92	(2.37)	[5]	2.09	(1.34, 3.26)	*
I have never smoked cigarettes	6.61	(0.52)	[1,2,3,4]	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, whose drinking led to work-related productivity loss in the past 12 months. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting work-related productivity loss; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 HealthRelated Behaviors Survey of Active Duty Military Personnel (Work-Related Productivity Loss, Q43C, Q43F-H, Q44I, Q45A-F).

Table 4.1.6 – Risk Behaviors – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Total	9.81	(0.45)				
Platform						
Ashore	9.86	(0.54)		0.96	(0.70,	1.32)
Afloat	9.82	(0.96)		0.93	(0.65,	1.33)
Aviation	9.38	(1.39)		1.00		
Gender						
Male	10.07	(0.49)		1.29	(0.99,	1.70)
Female	8.17	(1.12)		1.00		
Pay Grade						
E1-E4	13.30	(0.90)	2,4,5	1.96	(1.34,	2.88) *
E5-E6	8.59	(0.69)	1	1.15	(0.78,	1.69)
E7-E9	8.62	(1.28)		1.16	(0.74,	1.81)
W01-W05	4.79	(1.66)	1	0.60	(0.30,	1.20)
O1-O3	7.80	(1.34)	1	1.23	(0.77,	1.96)
O4-O10	7.24	(1.56)		1.00		
Age Group						
18-20	6.02	(2.47)		1.24	(0.43,	3.61)
21-25	13.39	(1.13)	4,5	2.99	(1.52,	5.88) *
26-35	10.26	(0.71)		2.21	(1.14,	4.30) *
36-45	7.15	(0.88)	2	1.49	(0.74,	3.00)
46-65	4.91	(1.55)	2	1.00		
Race/Ethnicity						
White, non-Hispanic	10.58	(0.53)		1.00		
African American, non-Hispanic	7.89	(1.83)		0.72	(0.44,	1.20)
Hispanic	7.68	(1.16)		0.70	(0.50,	0.99) *
Other	5.44	(1.64)		0.49	(0.26,	0.91) *
Education						
High school or less	10.26	(0.99)		1.07	(0.80,	1.43)
Some college	9.68	(0.61)		1.00	(0.78,	1.28)
College graduate or higher	9.68	(0.90)		1.00		

Table 4.1.6 – Risk Behaviors – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG						
	Prevalence			Odds Ratio[b] (95% CI)			
Family Status							
Not married	13.65	(0.87)	[3]	2.03	(1.64,	2.50)	*
Married, spouse not present	11.63	(1.79)	[3]	1.69	(1.16,	2.45)	*
Married, spouse present	7.24	(0.52)	[1,2]	1.00			
Children Living With You							
Yes	6.32	(0.56)	[2]	1.00			
No	12.42	(0.66)	[1]	2.10	(1.69,	2.62)	*
Combat Deployed in Past Year							
Yes	10.93	(2.67)		1.13	(0.65,	1.95)	
No	9.84	(0.51)		1.00			
Average Hours of Nightly Sleep							
9+ hours	11.00	(2.80)		1.11	(0.62,	1.99)	
7-8 hours	10.01	(0.75)		1.00			
5-6 hours	9.82	(0.79)		0.98	(0.77,	1.24)	
4 hours or less	12.13	(3.09)		1.24	(0.69,	2.24)	
Overall Stress in Past 12 Months							
High	12.72	(0.90)	[2]	1.53	(1.23,	1.89)	*
Low	8.72	(0.58)	[1]	1.00			
History of Physical Abuse							
Yes	13.90	(1.66)	[2]	1.51	(1.13,	2.03)	*
No	9.64	(0.52)	[1]	1.00			
History of Sexual Abuse							
Yes	10.37	(1.45)		1.02	(0.74,	1.42)	
No	10.16	(0.53)		1.00			
Risk-Taking							
High Risk Taking	17.63	(2.19)	[2]	2.12	(1.55,	2.92)	*
Low-Moderate Risk Taking	9.15	(0.51)	[1]	1.00			
Religiosity/Spirituality							
High	5.23	(0.73)	[2,3,4]	1.00			
Medium	10.78	(0.86)	[1,3]	2.19	(1.56,	3.07)	*
Low	15.63	(1.53)	[1,2,4]	3.36	(2.33,	4.84)	*
Not Applicable	10.86	(1.02)	[1,3]	2.21	(1.55,	3.15)	*

Table 4.1.6 – Risk Behaviors – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Vigorous Physical Exercise, Past 30 Days						
Yes	9.73	(0.47)		1.00		
No	11.09	(1.66)		1.16	(0.82, 1.64)	
Heavy Alcohol Use, Past 12 Months						
Yes	34.69	(2.62)	2	6.31	(4.90, 8.14)	*
No	7.76	(0.42)	1	1.00		
Current Smoker						
Yes	16.23	(1.30)	2	2.08	(1.66, 2.61)	*
No	8.52	(0.50)	1	1.00		
Depression						
High	17.60	(2.66)	2	2.00	(1.37, 2.91)	*
Low	9.66	(0.50)	1	1.00		
Anxiety						
High	16.86	(1.83)	2	2.00	(1.51, 2.65)	*
Low	9.20	(0.51)	1	1.00		
Anger						
High	19.65	(3.61)	2	2.32	(1.47, 3.68)	*
Low	9.53	(0.50)	1	1.00		
Resilience						
Low resilience	7.62	(2.27)		0.82	(0.42, 1.58)	
Moderate resilience	10.41	(0.66)		1.15	(0.91, 1.46)	
High resilience	9.18	(0.82)		1.00		
Possible PTS						
Possible PTS	25.37	(5.17)	2	3.10	(1.80, 5.34)	*
Unlikely PTS	9.88	(0.50)	1	1.00		
Suicidal Ideation Since Joining Military						
Yes	16.48	(3.55)	2	1.81	(1.08, 3.04)	*
No	9.81	(0.50)	1	1.00		
Self-Inflicted Injury - Lifetime						
Yes	18.49	(2.26)	2	2.20	(1.60, 3.01)	*
No	9.36	(0.51)	1	1.00		

Table 4.1.6 – Risk Behaviors – Prevalence Rates and Odds Ratios						
	USCG					
Characteristic[a]	**Prevalence**			**Odds Ratio**[b] **(95% CI)**		
Positive Coping						
Yes	10.24	(0.62)		1.01	(0.81,	1.26)
No	10.16	(0.84)		1.00		
Avoidance Coping						
Yes	13.84	(0.97)	[2]	1.77	(1.42, | 2.19)	*
No	8.34	(0.56)	[1]	1.00		
Social Network Facilitation - Alcohol						
Yes	10.82	(0.52)	[2]	6.86	(2.71, | 17.37)	*
No	1.74	(0.80)	[1]	1.00		
Social Network Facilitation - Cigarettes						
Yes	12.26	(0.63)	[2]	2.73	(2.02, | 3.69)	*
No	4.88	(0.66)	[1]	1.00		
Social Network Facilitation - Smokeless						
Yes	12.19	(0.67)	[2]	1.88	(1.48, | 2.39)	*
No	6.87	(0.67)	[1]	1.00		
Social Network Facilitation - RxDrugs						
Yes	25.83	(3.34)	[2]	3.33	(2.33, | 4.77)	*
No	9.46	(0.49)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	8.14	(0.63)	[2]	0.63	(0.51, | 0.78)	*
No	12.30	(0.76)	[1]	1.00		
Leadership Deterrence - Cigarettes						
Yes	9.04	(0.62)	[2]	0.75	(0.61, | 0.93)	*
No	11.68	(0.81)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	8.86	(0.62)	[2]	0.73	(0.59, | 0.90)	*
No	11.80	(0.79)	[1]	1.00		
Leadership Deterrence - RxDrugs						
Yes	10.22	(0.52)		1.10	(0.74,	1.64)
No	9.34	(1.64)		1.00		

Table 4.1.6 – Risk Behaviors – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG						
	Prevalence			Odds Ratio[b] (95% CI)			
Age of onset for alcohol use							
14 years old or younger	17.84	(1.51)	2,3,4	11.67	(6.21,	21.90)	*
15 to 17 years old	12.11	(0.83)	1,4	7.41	(4.00,	13.72)	*
18 to 20 years old	8.97	(0.90)	1,4	5.30	(2.81,	9.99)	*
21 years old or older	1.83	(0.55)	1,2,3	1.00			
Age of onset for tobacco use							
14 years old or younger	17.66	(2.40)	5	2.52	(1.77,	3.60)	*
15 to 17 years old	12.82	(1.33)	5	1.73	(1.31,	2.28)	*
18 to 20 years old	12.89	(1.42)	5	1.74	(1.30,	2.32)	*
21 years old or older	10.32	(2.14)		1.35	(0.84,	2.18)	
I have never smoked cigarettes	7.84	(0.56)	1,2,3	1.00			

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, whose drinking led to risk behaviors in the past 12 months. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting risk behaviors due to alcohol use; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 HealthRelated Behaviors Survey of Active Duty Military Personnel (Risk Behaviors due to Alcohol Consumption, Q44A-B, Q44D-E).

4.2　Tobacco Use

The survey included a number of measures of tobacco use to provide a comprehensive assessment of the extent of tobacco use among active duty USCG members and associated risk characteristics. This section presents the results of a detailed analysis of tobacco use in the USCG, including current prevalence rates of cigarette use and smoking intensity, attempts to quit or reduce smoking in the past 12 months, and smokeless tobacco use in the past 12 months.[15] In addition, results show which characteristics demonstrate strong associations with each measure of tobacco use.

As discussed in Chapter 2: Methodology, skip and branching logic were used in the web-based questionnaire. Respondents who indicated that they did not smoke at least 100 cigarettes (equivalent to 5 or more packs) over their entire lifetime were not asked the follow-up questions on cigarette use. The same applied to the smokeless tobacco questions – respondents who indicated that they have never used chewing tobacco, snuff, or any other form of smokeless tobacco were not asked the follow-up questions on smokeless tobacco use, as the questions were not applicable to them.

Overview of Findings

4.2.1 *Current Cigarette Use*

Respondents were asked two items to determine current cigarette smoking status based on the definition established in the 2010 National Health Interview Survey (NHIS). If the respondent smoked at least 100 cigarettes in their lifetime (equivalent to 5 or more packs) and indicated smoking cigarettes now "Every day" or "Some days," the respondent was classified as a current cigarette smoker.

Approximately one fifth (20%) of active duty USCG personnel were current cigarette smokers (see Table 4.2.2). Figure 4.2.A presents the relationship of platform to current cigarette use, as well as four variables that have strong associations with being a current cigarette smoker in the USCG: pay grade, education, social network facilitation of cigarette use, and age of onset for alcohol use.

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[15] Definitions for all of the measures reported in this section are explained in Appendix A: Key Definitions and Measures.

Figure 4.2.A: Indicators Associated with Being a Current Cigarette Smoker[16]
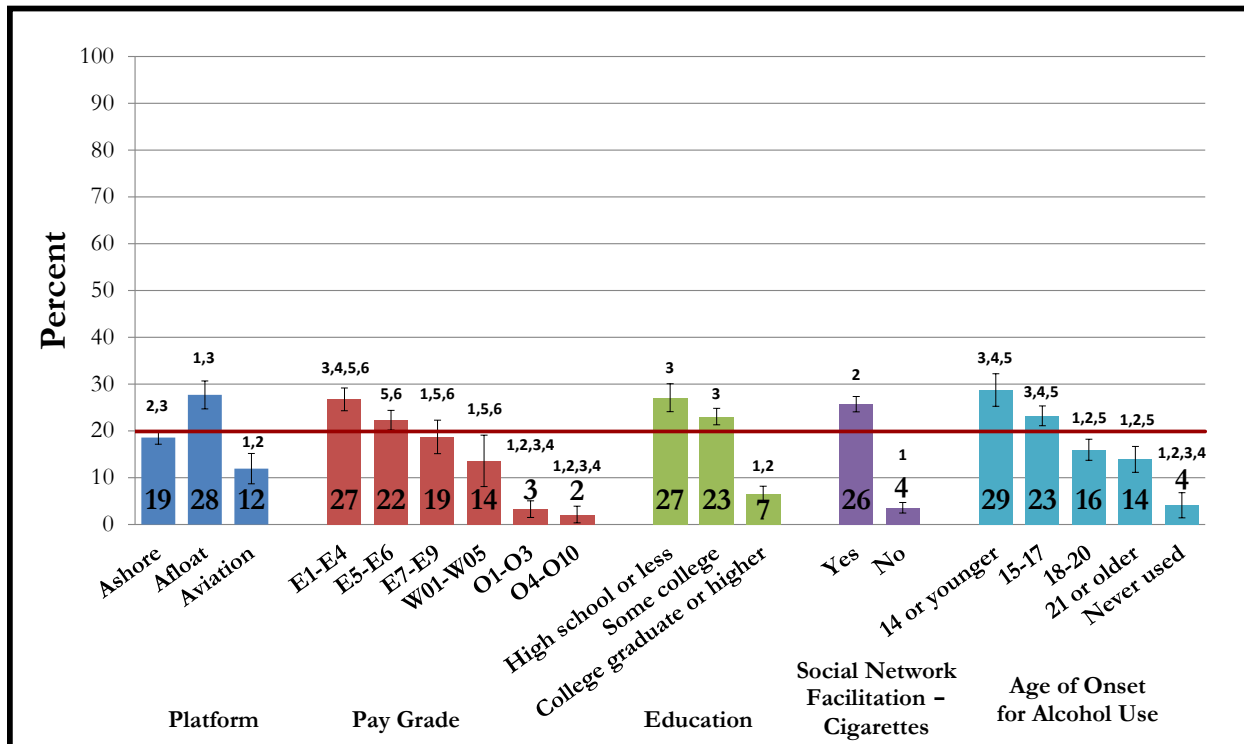
- USCG personnel stationed afloat had the highest prevalence rate of current cigarette use (28% vs. 12% and 19%); aviation personnel had the lowest prevalence rate (12% vs. 19% and 28%).

- Pay grade was associated with being a current cigarette smoker, with commissioned officers (i.e., O1-O3, O4-O10) having lower prevalence rates of current cigarette smoking than warrant officers and enlisted members (2%-3% vs. 14%-27%).

- USCG personnel with a college degree or higher had a lower prevalence rate of current cigarette smoking than those with some college or a high school diploma or less (7% vs. 23%-27%).

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[16] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group. For example, consider the platform bars in this figure:

[1]Indicates estimate is significantly different from the estimate in bar #1 (Ashore) at the 95% confidence level after Bonferroni adjustment.

[2]Indicates estimate is significantly different from the estimate in bar #2 (Afloat) at the 95% confidence level after Bonferroni adjustment.

[3]Indicates estimate is significantly different from the estimate in bar #3 (Aviation) at the 95% confidence level after Bonferroni adjustment.

- USCG personnel who reported social network facilitation of cigarette use had a higher prevalence rate of current cigarette smoking than those who did not report social network facilitation of cigarette use (26% vs. 4%).

- Age of onset for alcohol use was associated with being a current cigarette smoker, with those who initiated alcohol use at 17 years old or younger (i.e., 14 or younger, 15-17) having higher prevalence rates of current cigarette smoking than personnel who initiated alcohol use at 18 or older (i.e., 18-20, 21 or older; 23%-29% vs. 14%-16%). Those who reported they never used alcohol had the lowest prevalence rate of current cigarette smoking (4% vs. 14%-29%).

4.2.2 *Cigarette Smoking Intensity*

Similar to alcohol, respondents were classified into five smoking levels – abstainers, former smokers, current infrequent smokers, light/moderate smokers, and heavy smokers. This classification scheme was based on the definitions established by the 2010 National Health Interview Survey (NHIS) from the Centers for Disease Control and Prevention (CDC); the survey questions from the 2011 HRB that served as the basis for the classification were also from the NHIS survey. The definitions of the five smoking levels are summarized below. The analysis of smoking intensity focuses on those classified as light/moderate or heavy smokers.

- Abstainers, former smokers, and infrequent smokers:
  - Abstainers smoked less than 100 cigarettes in their lifetime;
  - Former smokers smoked at least 100 cigarettes in their lifetime, but did not smoke currently; and
  - Infrequent smokers reported currently smoking cigarettes some days.

- Light/moderate and heavy smokers:
  - Light/moderate smokers reported smoking cigarettes every day, but less than one pack (20 cigarettes) per day; and
  - Heavy smokers reported daily smoking and smoked a pack or more (greater than 20 cigarettes) per day.

Among active duty USCG personnel, 11% were light/moderate or heavy smokers (see Table 4.2.3). Figure 4.2.B presents the relationship of platform to light/moderate or heavy cigarette use, as well as four variables that have strong associations with being a light/moderate or heavy cigarette smoker in the USCG: pay grade, level of education, social network facilitation of cigarette use, and age of onset for alcohol use.

Figure 4.2.B: Indicators Associated with Being a Light/Moderate or Heavy Cigarette Smoker[17]
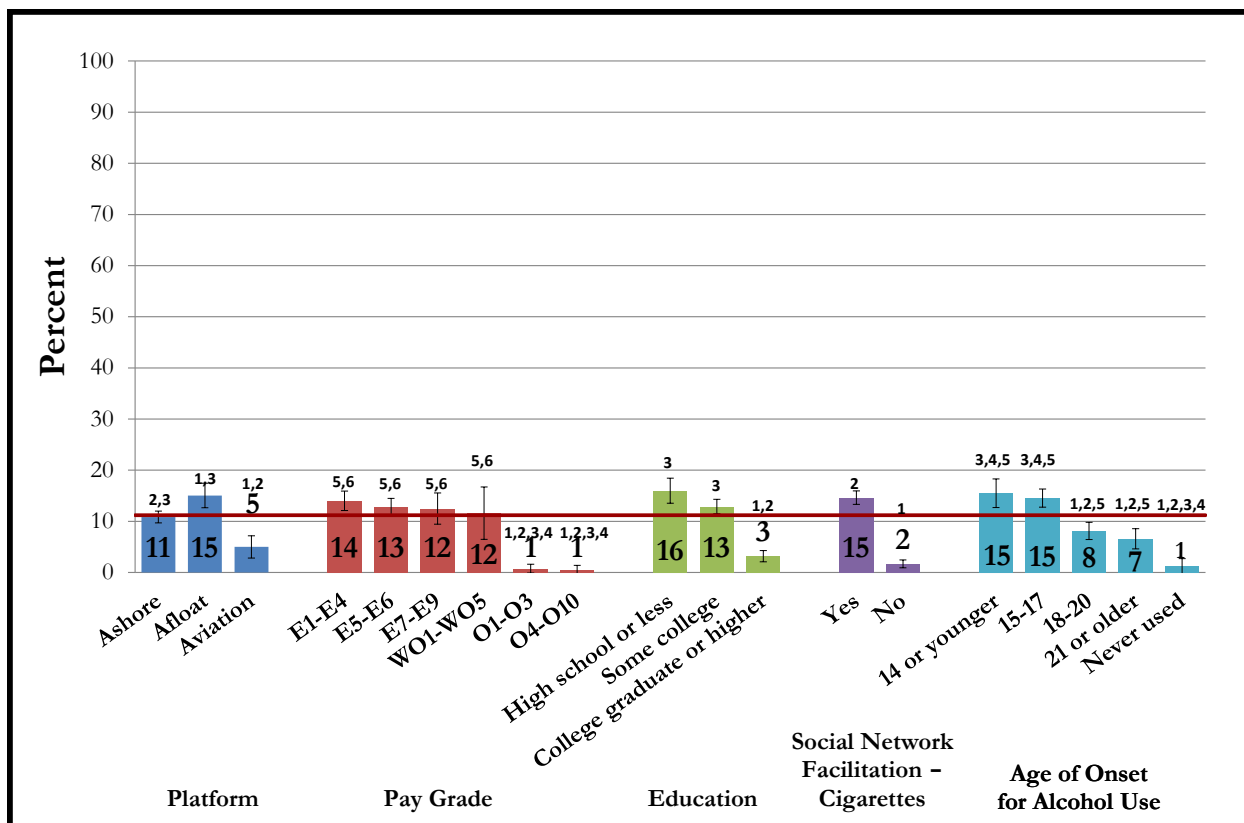
- USCG personnel stationed afloat had the highest prevalence rate of light/moderate and heavy cigarette smokers (15% vs. 5%-11%); aviation personnel had the lowest prevalence rate (5% vs. 11%-15%).

- Pay grade was associated with light/moderate and heavy cigarette use, with commissioned officers (i.e., O1-O3, O4-O10) having a lower prevalence rate of light/moderate and heavy cigarette use than warrant officers and enlisted members (1% vs. 12%-14%).

- USCG personnel with a college degree or higher had a lower prevalence rate of light/moderate and heavy cigarette use than those with some college or a high school diploma or less (3% vs. 13%-16%).

- USCG personnel who reported social network facilitation of cigarette use had a higher prevalence rate of light/moderate and heavy cigarette use than those who did not report social network facilitation of cigarette use (15% vs. 2%).

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[17] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- Finally, age of onset for alcohol use was associated with being a light/moderate or heavy cigarette smoker, with those who reported they started to drink alcohol at 18 or older (i.e., 18-20, 21 or older) having lower prevalence rates of light/moderate and heavy smoking than those who reported they started to drink alcohol at 17 or younger (i.e., 14 or younger, 15-17) (7%-8% vs. 15%); those who reported they never drank alcohol had the lowest prevalence rate of light/moderate and heavy cigarette smoking (1% vs. 7%-15%).

4.2.3 Attempts to Quit or Reduce Smoking in the Past 12 Months

Current cigarette smokers were asked two items to gauge the number of times they had tried to 1) quit smoking cigarettes and 2) reduce or cut back on the number of cigarettes smoked, for at least 30 consecutive days during the past 12 months. Responses were provided on a 5-point scale, ranging from "Never" to "6 or more times." Those who indicated they attempted to quit and/or reduce smoking at least once for 30 consecutive days in the past 12 months were categorized as attempting to quit and/or reduce smoking.

Approximately 75% of active duty USCG personnel who smoke cigarettes attempted to quit or reduce smoking in the past 12 months. The analyses revealed few significant relationships with attempts by current smokers to quit or reduce smoking, as shown in Table 4.2.4. There were no significant differences by platform in the percentage of current smokers in the USCG who attempted to quit or reduce smoking. Pay grade was associated with current smokers who attempted to quit or reduce smoking, with E7-E9s having the lowest rate of attempting to quit or reduce smoking compared to the other pay grade groups (i.e., E1-E4s, E5-E6s, and Officers (55% vs. 71%-82%)).

4.2.4 Smokeless Tobacco Use in the Past 12 Months

Respondents were asked two items to determine current smokeless tobacco use. If the respondent reported lifetime use of chewing tobacco, snuff, or any other form of smokeless tobacco and use within the past year, the respondent was classified as a current smokeless tobacco user.

Approximately 20% of active duty USCG personnel used smokeless tobacco in the past 12 months (see Table 4.2.5), including chewing tobacco, snuff, or other smokeless tobacco. Figure 4.2.C presents the relationship of platform to smokeless tobacco use in the past 12 months, as well as four variables that have strong associations with smokeless tobacco use in the past 12 months in the USCG: gender, race/ethnicity, social network facilitation of smokeless tobacco use, and age of onset for alcohol use.

Figure 4.2.C: Indicators Associated with Smokeless Tobacco Use[18]
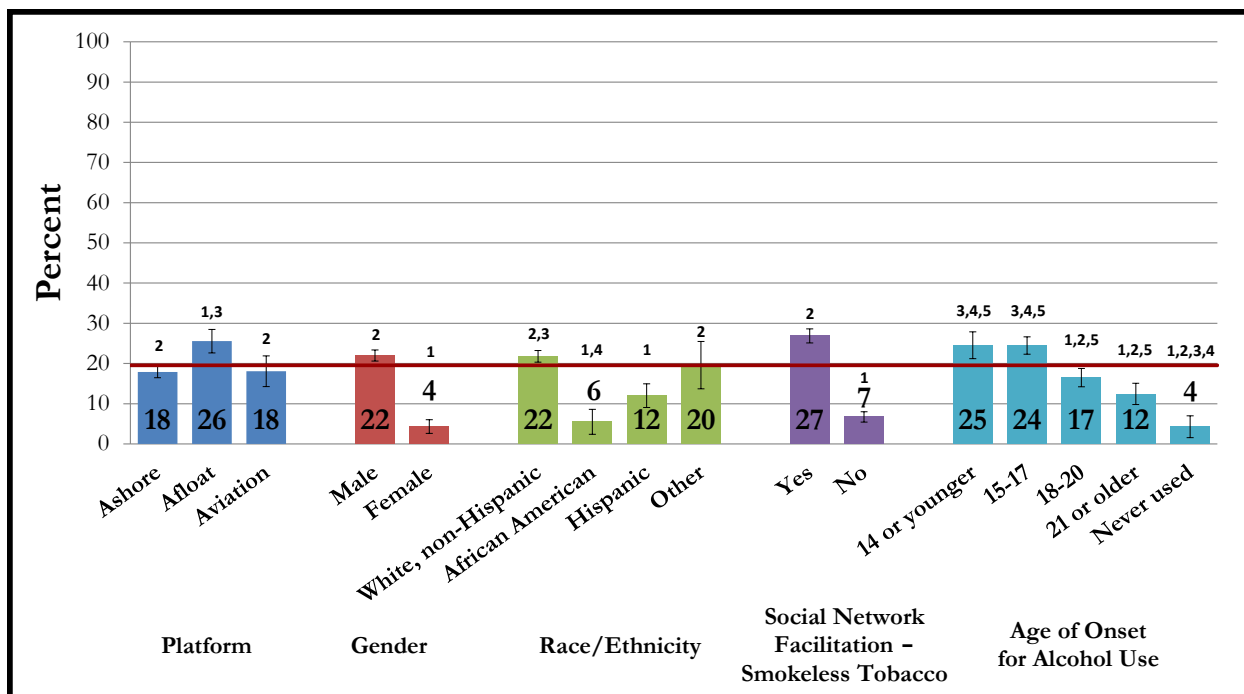
- USCG personnel stationed afloat had the highest prevalence rate of smokeless tobacco use (26% vs. 18%).

- Male USCG personnel had a higher prevalence rate of smokeless tobacco use than female USCG personnel (22% vs. 4%).

- White, non-Hispanic USCG personnel had a higher prevalence rate of smokeless tobacco use than African American, non-Hispanic USCG personnel and Hispanic USCG personnel (22% vs. 6%-12%).

- USCG personnel who reported social network facilitation of smokeless tobacco use had a higher prevalence rate of smokeless tobacco use than those who did not report social network facilitation of smokeless tobacco use (27% vs. 7%).

- Age of onset for alcohol use was associated with being a smokeless tobacco user, with those who reported they started to consume alcohol at 18 or older (i.e., 18-20, 21 or older) having lower prevalence rates of smokeless tobacco use than those who reported they started to drink alcohol at 17 or younger (i.e., 14 or younger, 15-17; 12%-17% vs. 24%-25%); those

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[18] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

who reported they never drank alcohol had the lowest prevalence rate of smokeless tobacco use (4% vs. 12%-25%).

4.2.5 *Status of Selected Healthy People 2020 Health Promotion Objectives*

We examined any cigarette use and smokeless tobacco use in the past 30 days, respectively, to assess USCG personnel's progress towards the *Healthy People 2020 Health Promotion Objectives*, as presented in Table 4.2.1. Rates of cigarette use in the past month in the USCG, at 20.4%, were almost twice as high as the *Healthy People 2020* objective of 12.0%, although the rate was comparable with the civilian estimate of 19.0%. The discrepancy in rates of smokeless tobacco use between the USCG and the *Healthy People 2020* objective is even more pronounced, with 13.5% of USCG members using smokeless tobacco in the past month compared to the *Healthy People 2020* objective of 0.3% and the civilian estimate of 2.7%.

Table 4.2.1 – Healthy People 2020 Health Promotion Objectives: Tobacco[19]			
Measure	Healthy People 2020 Objective[20]	2011 Civilian Estimate[21]	USCG Estimate
Any Cigarette Use, Past 30 Days	12.0%	19.0%	20.4% (0.6)
Smokeless Tobacco Use, Past 30 Days	0.3%	2.7%	13.5% (0.5)

4.2.6 *Interpretations and Recommendations*

USCG leadership has been addressing the issue of nicotine use and smoking since the 1970s. The first goal of CG-11 is to make smoking inconvenient at USCG installations. Approximately 75% of USCG personnel who smoke reported attempts to reduce and/or quit the use of cigarettes; promoting an environment that supports this effort requires the involvement of effective leadership.

One out of five USCG members reported being a current smoker, and 11% indicated they smoke every day. The afloat community had the highest prevalence rate of current cigarette use, with over one quarter indicating they are current smokers; however, over three quarters indicated they had quit and/or reduced smoking for at least 30 consecutive days in the past 12 months, suggesting a desire to "quit or cut down." The afloat community also had the highest prevalence rate of light/moderate and heavy cigarette use, and smokeless tobacco use. Thus, efforts to reduce smoking may be effectively targeted towards the afloat community. CG-11 suggests that it is time to consider both

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[19] Note: Table displays the Healthy People 2020 Objective, the civilian estimate for the objective (as presented by the Healthy People data search (http://healthypeople.gov), and the HRB estimate for USCG personnel. The standard error of the USCG estimate is presented in parentheses.
[20] Department of Health and Human Services. (2010). *Healthy People 2020,* Retrieved September 2013, from http://healthypeople.gov.
[21] Civilian estimate was from the 2010–2011 National Health Interview Survey (NHIS). This survey employs a different methodology than the 2011 HRB. Due to possible differences in measurement error, comparisons should be made with caution.

smoke-free cutters and smoke-free installations; one possibility may be to begin a pilot program whereby one cutter volunteers to become smoke-free and/or incentivizing a cutter that remains smoke-free.

Analyses showed that pay grade was also a strong covariate of tobacco use. Commissioned officers had lower prevalence rates of being current cigarette smokers and light/moderate and heavy cigarette users than warrant officers and enlisted members. Those in the E7-E9 rank group had the lowest prevalence rate of attempting to quit or reduce smoking compared to E1s-E4s, E5-E6s, and Officers. Efforts toward reducing smoking may be most influential in focusing on service members in the enlisted pay grades.

Age of onset for alcohol use was among the strongest covariates for three out of the four tobacco-related outcome variables – current cigarette use, light/moderate or heavy cigarette use, and smokeless tobacco use. USCG personnel who reported first using alcohol at age 17 or younger had a higher prevalence rate of current cigarette use, light/moderate or heavy cigarette use, and smokeless tobacco use than those who reported first using alcohol at age 18 or older. Those who reported they never drank alcohol had the lowest prevalence rate of current cigarette use, light/moderate or heavy cigarette use, and smokeless tobacco use.

Perhaps not surprisingly, social network facilitation of cigarette use and social network facilitation of smokeless tobacco use were also among the strongest covariates for the four tobacco-related outcomes, including current cigarette use, light/moderate and heavy cigarette use, attempts to quit or reduce smoking, and smokeless tobacco use. These findings suggest that the behavior of peers may influence service members' own substance use behaviors (i.e., if one's peers participate in smoking cigarettes, it may appear to be condoned, accepted, and potentially facilitated) and highlight the importance of social networks and culture on tobacco use. Therefore, those who have chosen to quit tobacco products should avoid environments where tobacco is present and peer influence is strong.

In an effort to decrease smoking across the USCG, CG-11 suggests selecting certain installations to become smoke-free. For those personnel who are nicotine dependent, nicotine replacement therapy could be offered at the exchanges in the form of gum, lozenges, and patches to address the issue of cravings. Over three quarters of those who currently smoke indicated they tried to cut down or quit smoking for 30 consecutive days at least once in the past 12 months, providing a strong message for the preventionist to act upon. The Stages of Change Model (transtheoretical model), which posits that health behavior change involves progression through six stages (precontemplation,

contemplation, preparation, action, maintenance, and termination),[22] suggests that this group is in the contemplation or action phase of change and should be supported.

CG-11 also recommends that leadership assist nicotine termination efforts in a therapeutic and supportive environment by finding creative ways to encourage tobacco-free efforts, with the expectation that relapses will occur. Enhancing current efforts such as work with the Addictive Substance Misuse Advisory Committee for Tobacco, bolstering nicotine use policy to grant commanding officers the authority to establish a tobacco-free campus, and supporting "C" school policy that there will be no smoking during class hours for both students and instructors is both supported and encouraged by CG-11. Utilizing national efforts such as the CDC's toll free quit line (800-QUIT-NOW) should also be strongly encouraged during austere budget climates so duplication of interventions can be curtailed. Health Promotion Managers and Unit Health Promotion Coordinators, medical professionals (physicians, dentists, pharmacists, physician assistants, corpsman) and those interested in the wellness and readiness of the fleet should remain vigilant and steadfast in assisting members to become smoke-free.

Tables

The following tables present an in-depth analysis of tobacco use in the USCG.

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[22] Prochaska, J. O., & Velicer, W. F. (1997). The Transtheoretical Model of Health Behavior Change. *American Journal of Health Promotion*, *12*(1), 38-48.

Table 4.2.2 – Current Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	Prevalence		USCG Odds Ratio[b] (95% CI)		
Total	19.9	(0.63)			
Platform					
Ashore	18.61	(0.74) [2,3]	1.78	(1.30, 2.45)	*
Afloat	27.71	(1.52) [1,3]	2.59	(1.85, 3.64)	*
Aviation	11.95	(1.65) [1,2]	1.00		
Gender					
Male	20.36	(0.68)	1.19	(0.96, 1.48)	
Female	17.09	(1.60)	1.00		
Pay Grade					
E1-E4	26.76	(1.24) [3,4,5,6]	15.47	(7.89, 30.33)	*
E5-E6	22.30	(1.07) [5,6]	12.40	(6.34, 24.26)	*
E7-E9	18.73	(1.83) [1,5,6]	9.97	(4.99, 19.92)	*
W01-W05	13.61	(2.80) [1,5,6]	7.30	(3.40, 15.65)	*
O1-O3	3.30	(0.91) [1,2,3,4]	1.88	(0.84, 4.21)	
O4-O10	2.16	(0.91) [1,2,3,4]	1.00		
Age Group					
18-20	18.23	(4.21)	1.74	(0.85, 3.55)	
21-25	26.87	(1.54) [3,4,5]	2.87	(1.77, 4.64)	*
26-35	19.27	(0.97) [2]	1.86	(1.16, 2.99)	*
36-45	15.70	(1.29) [2]	1.45	(0.89, 2.38)	
46-65	11.37	(2.35) [2]	1.00		
Race/Ethnicity					
White, non-Hispanic	20.89	(0.73) [3]	1.00		
African American, non-Hispanic	20.01	(2.78)	0.95	(0.67, 1.35)	
Hispanic	13.59	(1.58) [1,4]	0.60	(0.45, 0.79)	*
Other	22.34	(3.13) [3]	1.09	(0.76, 1.57)	
Education					
High school or less	27.11	(1.52) [3]	5.24	(3.91, 7.02)	*
Some college	23.07	(0.90) [3]	4.22	(3.22, 5.53)	*
College graduate or higher	6.63	(0.79) [1,2]	1.00		

Table 4.2.2 – Current Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Family Status						
Not married	24.18	(1.15)	[3]	1.55	(1.32, 1.83)	*
Married, spouse not present	22.94	(2.44)	[3]	1.45	(1.08, 1.94)	*
Married, spouse present	17.02	(0.78)	[1,2]	1.00		
Children Living With You						
Yes	16.99	(0.90)	[1]	1.00		
No	22.13	(0.87)	[2]	1.39	(1.18, 1.63)	*
Combat Deployed in Past Year						
Yes	23.79	(3.62)		1.33	(0.89, 1.98)	
No	19.00	(0.66)		1.00		
Average Hours of Nightly Sleep						
9+ hours	18.38	(3.46)		1.15	(0.72, 1.84)	
7-8 hours	16.37	(0.92)	[3]	1.00		
5-6 hours	22.25	(1.10)	[2]	1.46	(1.22, 1.75)	*
4 hours or less	25.38	(4.04)		1.74	(1.12, 2.69)	*
Overall Stress in Past 12 Months						
High	22.07	(1.11)	[2]	1.30	(1.10, 1.53)	*
Low	17.91	(0.79)	[1]	1.00		
History of Physical Abuse						
Yes	23.06	(2.01)	[2]	1.30	(1.02, 1.65)	*
No	18.78	(0.69)	[1]	1.00		
History of Sexual Abuse						
Yes	18.53	(1.83)		0.94	(0.73, 1.21)	
No	19.45	(0.70)		1.00		
Risk-Taking						
High Risk Taking	27.87	(2.56)	[2]	1.71	(1.32, 2.23)	*
Low-Moderate Risk Taking	18.41	(0.68)	[1]	1.00		
Religiosity/Spirituality						
High	12.58	(1.07)	[2,3,4]	1.00		
Medium	19.37	(1.09)	[1,4]	1.67	(1.32, 2.11)	*
Low	23.18	(1.78)	[1]	2.10	(1.60, 2.76)	*
Not Applicable	24.45	(1.40)	[1,2]	2.25	(1.77, 2.86)	*

Table 4.2.2 – Current Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Vigorous Physical Exercise, Past 30						
Yes	18.99	(0.66)	[2]	1.00		
No	27.14	(2.46)	[1]	1.59	(1.23, 2.05)	*
Heavy Alcohol Use, Past 12 Months						
Yes	40.12	(2.80)	[2]	3.01	(2.36, 3.84)	*
No	18.20	(0.63)	[1]	1.00		
Depression						
High	32.50	(3.25)	[2]	2.11	(1.56, 2.85)	*
Low	18.58	(0.66)	[1]	1.00		
Anxiety						
High	24.51	(2.08)	[2]	1.43	(1.12, 1.81)	*
Low	18.55	(0.68)	[1]	1.00		
Anger						
High	31.99	(4.23)	[2]	2.04	(1.38, 3.01)	*
Low	18.76	(0.67)	[1]	1.00		
Resilience						
Low resilience	15.34	(3.03)		0.89	(0.55, 1.44)	
Moderate resilience	20.62	(0.87)	[3]	1.28	(1.07, 1.54)	*
High resilience	16.86	(1.06)	[2]	1.00		
Possible PTS						
Possible PTS	29.33	(5.32)	[2]	1.76	(1.06, 2.93)	*
Unlikely PTS	19.04	(0.66)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	26.23	(4.19)		1.51	(0.98, 2.33)	
No	19.03	(0.66)		1.00		
Self-Inflicted Injury - Lifetime						
Yes	29.57	(2.63)	[2]	1.87	(1.44, 2.43)	*
No	18.36	(0.67)	[1]	1.00		
Positive Coping						
Yes	18.50	(0.79)	[2]	0.83	(0.71, 0.99)	*
No	21.40	(1.13)	[1]	1.00		

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Avoidance Coping					
Yes	18.81	(1.09)		0.94	(0.79, 1.11)
No	19.83	(0.81)		1.00	
Social Network Facilitation - Alcohol					
Yes	20.42	(0.67)	[2]	3.27	(2.06, 5.21)	*
No	7.27	(1.58)	[1]	1.00	
Social Network Facilitation - Cigarettes					
Yes	25.72	(0.83)	[2]	9.30	(6.68, 12.95)	*
No	3.59	(0.57)	[1]	1.00	
Social Network Facilitation - Smokeless					
Yes	22.99	(0.86)	[2]	1.88	(1.58, 2.25)	*
No	13.68	(0.91)	[1]	1.00	
Social Network Facilitation - RxDrugs					
Yes	29.49	(3.47)	[2]	1.78	(1.27, 2.49)	*
No	19.06	(0.65)	[1]	1.00	
Leadership Deterrence - Alcohol					
Yes	20.48	(0.89)		1.13	(0.96, 1.33)
No	18.52	(0.93)		1.00	
Leadership Deterrence - Cigarettes					
Yes	20.82	(0.86)	[2]	1.24	(1.05, 1.46)	*
No	17.55	(0.95)	[1]	1.00	
Leadership Deterrence - Smokeless					
Yes	20.12	(0.87)		1.10	(0.94, 1.29)
No	18.63	(0.94)		1.00	
Leadership Deterrence - RxDrugs					
Yes	20.37	(0.68)	[2]	2.60	(1.76, 3.85)	*
No	8.95	(1.60)	[1]	1.00	

Table 4.2.2 – Current Smokers – Prevalence Rates and Odds Ratios

Table 4.2.2 – Current Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Age of onset for alcohol use						
14 years old or younger	28.74	(1.78)	3,4,5	9.38	(4.67, 18.83)	*
15 to 17 years old	23.23	(1.08)	3,4,5	7.03	(3.54, 13.98)	*
18 to 20 years old	15.97	(1.15)	1,2,5	4.42	(2.20, 8.87)	*
21 years old or older	13.92	(1.41)	1,2,5	3.76	(1.84, 7.68)	*
I have never consumed any alcohol	4.12	(1.37)	1,2,3,4	1.00		
Age of onset for tobacco use						
14 years old or younger	48.75	(3.14)		0.81	(0.56, 1.17)	
15 to 17 years old	45.28	(1.99)		0.70	(0.51, 0.96)	*
18 to 20 years old	50.13	(2.11)		0.85	(0.62, 1.18)	
21 years old or older	54.05	(3.47)		1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as current smokers. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting current smokers; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Current Smoker, Q61, Q64).

Table 4.2.3 – Light/Moderate and Heavy Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Total	11.18	(0.50)			
Platform					
Ashore	10.85	(0.59) [2,3]	2.17	(1.39, 3.40)	*
Afloat	15.05	(1.22) [1,3]	2.79	(1.75, 4.47)	*
Aviation	5.00	(1.11) [1,2]	1.00		
Gender					
Male	11.41	(0.54)	1.14	(0.87, 1.50)	
Female	9.72	(1.26)	1.00		
Pay Grade					
E1-E4	14.01	(0.97) [5,6]	21.74	(6.90, 68.49)	*
E5-E6	12.79	(0.86) [5,6]	20.17	(6.42, 63.39)	*
E7-E9	12.49	(1.55) [5,6]	20.29	(6.36, 64.75)	*
WO1-WO5	11.60	(2.61) [5,6]	18.23	(5.45, 60.98)	*
O1-O3	0.74	(0.44) [1,2,3,4]	1.20	(0.27, 5.37)	
O4-O10	0.52	(0.45) [1,2,3,4]	1.00		
Age Group					
18-20	11.72	(3.51)	1.49	(0.64, 3.48)	
21-25	14.31	(1.22) [3]	1.88	(1.07, 3.29)	*
26-35	10.35	(0.75) [2]	1.30	(0.75, 2.25)	
36-45	9.91	(1.06)	1.23	(0.69, 2.20)	
46-65	8.18	(2.03)	1.00		
Race/Ethnicity					
White, non-Hispanic	12.01	(0.58) [3]	1.00		
African American, non-Hispanic	11.12	(2.19)	0.92	(0.59, 1.43)	
Hispanic	7.28	(1.20) [1]	0.58	(0.40, 0.83)	*
Other	8.93	(2.14)	0.72	(0.42, 1.22)	
Education					
High school or less	15.99	(1.25) [3]	5.77	(3.87, 8.60)	*
Some college	12.89	(0.72) [3]	4.49	(3.08, 6.54)	*
College graduate or higher	3.19	(0.56) [1,2]	1.00		

Table 4.2.3 – Light/Moderate and Heavy Smokers – Prevalence Rates and Odds Ratios					
Characteristic[a]	**USCG**				
			Odds Ratio[b]		
	Prevalence		**(95% CI)**		
Family Status					
Not married	12.96	(0.90) [3]	1.37	(1.11, 1.68)	*
Married, spouse not present	13.69	(2.00)	1.46	(1.02, 2.08)	*
Married, spouse present	9.82	(0.62) [1]	1.00		
Children Living With You					
Yes	9.69	(0.71) [2]	1.00		
No	12.31	(0.69) [1]	1.31	(1.07, 1.60)	*
Combat Deployed in Past Year					
Yes	11.73	(2.74)	1.10	(0.65, 1.86)	
No	10.80	(0.52)	1.00		
Average Hours of Nightly Sleep					
9+ hours	7.70	(2.38)	0.83	(0.42, 1.62)	
7-8 hours	9.18	(0.72) [3]	1.00		
5-6 hours	13.35	(0.90) [2]	1.52	(1.21, 1.91)	*
4 hours or less	14.47	(3.27)	1.67	(0.97, 2.88)	
Overall Stress in Past 12 Months					
High	13.04	(0.91) [2]	1.37	(1.12, 1.69)	*
Low	9.85	(0.61) [1]	1.00		
History of Physical Abuse					
Yes	14.83	(1.70) [2]	1.52	(1.14, 2.02)	*
No	10.28	(0.53) [1]	1.00		
History of Sexual Abuse					
Yes	11.58	(1.51)	1.08	(0.80, 1.48)	
No	10.79	(0.54)	1.00		
Risk-Taking					
High Risk Taking	17.12	(2.15) [2]	1.82	(1.33, 2.50)	*
Low-Moderate Risk Taking	10.18	(0.53) [1]	1.00		

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Religiosity/Spirituality					
High	6.94	(0.82)	[2,3,4]	1.00	
Medium	10.84	(0.86)	[1]	1.63	(1.20, 2.21)	*
Low	13.02	(1.42)	[1]	2.01	(1.42, 2.85)	*
Not Applicable	14.28	(1.14)	[1]	2.24	(1.64, 3.04)	*
Vigorous Physical Exercise, Past 30					
Yes	10.26	(0.51)	[2]	1.00	
No	18.54	(2.15)	[1]	1.99	(1.48, 2.68)	*
Heavy Alcohol Use, Past 12 Months					
Yes	24.06	(2.45)	[2]	2.82	(2.12, 3.74)	*
No	10.10	(0.49)	[1]	1.00	
Depression					
High	22.47	(2.90)	[2]	2.57	(1.82, 3.62)	*
Low	10.15	(0.51)	[1]	1.00	
Anxiety					
High	15.60	(1.75)	[2]	1.64	(1.24, 2.18)	*
Low	10.12	(0.53)	[1]	1.00	
Anger					
High	20.35	(3.65)	[2]	2.19	(1.39, 3.45)	*
Low	10.44	(0.52)	[1]	1.00	
Resilience					
Low resilience	7.28	(2.18)		0.77	(0.40, 1.49)	
Moderate resilience	11.86	(0.69)		1.32	(1.05, 1.66)	*
High resilience	9.25	(0.82)		1.00	
Possible PTS					
Possible PTS	20.31	(4.70)	[2]	2.13	(1.20, 3.79)	*
Unlikely PTS	10.67	(0.52)	[1]	1.00	
Suicidal Ideation Since Joining Military					
Yes	17.90	(3.65)	[2]	1.82	(1.11, 3.00)	*
No	10.68	(0.52)	[1]	1.00	

Table 4.2.3 – Light/Moderate and Heavy Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Self-Inflicted Injury - Lifetime						
Yes	19.38	(2.28)	[2]	2.13	(1.57, 2.89)	*
No	10.15	(0.52)	[1]	1.00		
Positive Coping						
Yes	10.26	(0.62)	[2]	0.80	(0.65, 0.99)	*
No	12.50	(0.91)	[1]	1.00		
Avoidance Coping						
Yes	11.53	(0.89)		1.09	(0.88, 1.36)	
No	10.64	(0.63)		1.00		
Social Network Facilitation - Alcohol						
Yes	11.50	(0.53)	[2]	3.40	(1.79, 6.44)	*
No	3.68	(1.14)	[1]	1.00		
Social Network Facilitation - Cigarettes						
Yes	14.62	(0.67)	[2]	10.04	(6.24, 16.16)	*
No	1.68	(0.39)	[1]	1.00		
Social Network Facilitation - Smokeless						
Yes	12.62	(0.68)	[2]	1.61	(1.29, 2.02)	*
No	8.22	(0.73)	[1]	1.00		
Social Network Facilitation - RxDrugs						
Yes	17.61	(2.90)	[2]	1.79	(1.19, 2.67)	*
No	10.69	(0.51)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	11.63	(0.74)		1.14	(0.93, 1.39)	
No	10.37	(0.70)		1.00		
Leadership Deterrence - Cigarettes						
Yes	12.37	(0.70)	[2]	1.42	(1.15, 1.76)	*
No	9.03	(0.71)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	11.85	(0.70)		1.23	(1.00, 1.51)	
No	9.89	(0.72)		1.00		

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Leadership Deterrence - RxDrugs						
Yes	11.48	(0.54)	2	2.40	(1.45, 3.99)	*
No	5.12	(1.23)	1	1.00		
Age of onset for alcohol use						
14 years old or younger	15.49	(1.42)	3,4,5	14.77	(4.27, 51.05)	*
15 to 17 years old	14.55	(0.90)	3,4,5	13.72	(4.01, 46.95)	*
18 to 20 years old	8.11	(0.86)	1,2,5	7.11	(2.05, 24.64)	*
21 years old or older	6.58	(1.01)	1,2,5	5.68	(1.60, 20.08)	*
I have never consumed any alcohol	1.23	(0.76)	1,2,3,4	1.00		
Age of onset for tobacco use						
14 years old or younger	32.55	(2.94)		1.13	(0.76, 1.68)	
15 to 17 years old	26.93	(1.77)		0.86	(0.61, 1.22)	
18 to 20 years old	24.31	(1.81)		0.75	(0.53, 1.07)	
21 years old or older	29.90	(3.19)		1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as light/moderate or heavy smokers. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting light/moderate or heavy smokers; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Light/Moderate or Heavy Smoker, Q61, Q64, Q66).

Table 4.2.4 – Quit and/or Reduced Smoking for 30 Consecutive Days in Past Year Among Current Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Total	74.7	(1.54)		
Platform				
Ashore	73.05	(1.96)	0.68	(0.33, 1.41)
Afloat	77.43	(2.72)	0.80	(0.37, 1.72)
Aviation	78.55	(6.08)	1.00	
Gender				
Male	74.19	(1.65)	0.96	(0.61, 1.50)
Female	78.32	(4.29)	1.00	
Pay Grade				
E1-E4	82.13	(2.08) [2,3]	1.24	(0.63, 2.43)
E5-E6	71.49	(2.48) [1,3]	0.70	(0.36, 1.35)
E7-E9	54.78	(5.43) [1,2,4]	0.39	(0.19, 0.79) *
Officers	80.48	(6.45) [3]	1.00	
Age Group				
18-25	81.42	(2.53) [3]	1.56	(0.56, 4.37)
26-35	76.12	(2.40) [3]	1.14	(0.41, 3.12)
36-45	60.19	(4.42) [1,2]	0.54	(0.19, 1.52)
46-65	†		1.00	
Race/Ethnicity				
White, non-Hispanic	73.12	(1.74)	1.00	
African American, non-Hispanic	69.17	(7.36)	0.82	(0.41, 1.64)
Hispanic	87.35	(4.19)	2.54	(1.19, 5.42) *
Other	83.61	(6.03)	1.88	(0.79, 4.47)
Education				
High school or less	71.76	(2.97)	1.11	(0.61, 2.02)
Some college	76.67	(1.89)	1.43	(0.81, 2.53)
College graduate or higher	69.66	(5.75)	1.00	
Family Status				
Not married	73.48	(2.43)	0.89	(0.64, 1.25)
Married, spouse not present	75.06	(5.28)	0.97	(0.54, 1.76)
Married, spouse present	75.61	(2.16)	1.00	

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Children Living With You				
Yes	75.06	(2.55)	1.00	
No	74.46	(1.94)	0.97	(0.69, 1.35)
Combat Deployed in Past Year				
Yes	78.13	(7.29)	1.31	(0.56, 3.04)
No	73.17	(1.72)	1.00	
Average Hours of Nightly Sleep				
9+ hours	†		1.55	(0.50, 4.79)
7-8 hours	74.37	(2.70)	1.00	
5-6 hours	72.00	(2.52)	0.89	(0.61, 1.28)
4 hours or less	†		1.59	(0.59, 4.22)
Overall Stress in Past 12 Months				
High	80.02	(2.29) [2]	1.77	(1.25, 2.51) *
Low	69.34	(2.24) [1]	1.00	
History of Physical Abuse				
Yes	65.31	(4.75) [2]	0.62	(0.40, 0.97) *
No	75.17	(1.75) [1]	1.00	
History of Sexual Abuse				
Yes	76.98	(4.64)	1.22	(0.71, 2.09)
No	73.32	(1.77)	1.00	
Risk-Taking				
High Risk Taking	73.50	(4.84)	1.02	(0.61, 1.71)
Low-Moderate Risk Taking	73.10	(1.81)	1.00	
Religiosity/Spirituality				
High	76.35	(3.90)	1.00	
Medium	75.85	(2.70)	0.97	(0.58, 1.62)
Low	69.68	(4.03)	0.71	(0.41, 1.25)
Not Applicable	72.46	(2.94)	0.82	(0.49, 1.36)

Table 4.2.4 – Quit and/or Reduced Smoking for 30 Consecutive Days in Past Year Among Current Smokers – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Vigorous Physical Exercise, Past 30 Days				
Yes	75.36	(1.66)	1.00	
No	72.36	(4.76)	0.86	(0.52, 1.41)
Heavy Alcohol Use, Past 12 Months				
Yes	77.17	(3.80)	1.18	(0.75, 1.85)
No	74.18	(1.69)	1.00	
Depression				
High	80.70	(4.83)	1.56	(0.84, 2.93)
Low	72.76	(1.76)	1.00	
Anxiety				
High	80.70	(3.88)	1.62	(0.97, 2.72)
Low	72.09	(1.83)	1.00	
Anger				
High	60.25	(7.92)	0.53	(0.27, 1.03)
Low	74.15	(1.73)	1.00	
Resilience				
Low resilience	†		0.97	(0.37, 2.55)
Moderate resilience	74.12	(2.08)	1.15	(0.80, 1.66)
High resilience	71.35	(3.13)	1.00	
Possible PTS				
Possible PTS	†		1.41	(0.49, 4.03)
Unlikely PTS	73.26	(1.70)	1.00	
Suicidal Ideation Since Joining Military				
Yes	†		1.13	(0.48, 2.68)
No	73.45	(1.70)	1.00	
Self-Inflicted Injury - Lifetime				
Yes	76.76	(4.51)	1.22	(0.72, 2.06)
No	72.99	(1.79)	1.00	

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Positive Coping				
Yes	75.39	(2.05)	1.28	(0.91, 1.79)
No	70.59	(2.73)	1.00	
Avoidance Coping				
Yes	75.75	(2.78)	1.18	(0.83, 1.69)
No	72.57	(2.04)	1.00	
Social Network Facilitation - Alcohol				
Yes	73.57	(1.64)	0.20	(0.03, 1.17)
No	†		1.00	
Social Network Facilitation - Cigarettes				
Yes	73.27	(1.66)	0.51	(0.21, 1.22)
No	84.44	(5.89)	1.00	
Social Network Facilitation - Smokeless				
Yes	73.22	(1.89)	0.89	(0.61, 1.29)
No	75.51	(3.08)	1.00	
Social Network Facilitation - RxDrugs				
Yes	86.11	(4.88) [2]	2.30	(1.02, 5.16) *
No	72.95	(1.68) [1]	1.00	
Leadership Deterrence - Alcohol				
Yes	73.74	(2.24)	0.98	(0.71, 1.37)
No	74.05	(2.35)	1.00	
Leadership Deterrence - Cigarettes				
Yes	74.03	(2.05)	1.03	(0.73, 1.44)
No	73.52	(2.63)	1.00	
Leadership Deterrence - Smokeless				
Yes	73.44	(2.15)	0.96	(0.69, 1.33)
No	74.32	(2.46)	1.00	

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Leadership Deterrence - RxDrugs				
Yes	73.70	(1.66)	0.95	(0.40, 2.24)
No	†		1.00	
Age of onset for alcohol use				
14 years old or younger	74.14	(3.25)	0.95	(0.52, 1.72)
15 to 17 years old	73.38	(2.36)	0.91	(0.53, 1.58)
18 to 20 years old	77.30	(3.31)	1.13	(0.61, 2.09)
21 years old or older	75.11	(4.75)	1.00	
Age of onset for tobacco use				
14 years old or younger	72.83	(4.05)	0.96	(0.53, 1.71)
15 to 17 years old	74.42	(2.60)	1.04	(0.63, 1.71)
18 to 20 years old	76.13	(2.56)	1.14	(0.69, 1.88)
21 years old or older	73.72	(4.18)	1.00	

Note: Table displays the percentages and odds ratios of USCG personnel classified as current smokers, by sociodemographic and other characteristics of interest, who quit and/or reduced smoking for 30 consecutive days in the past year. The standard error and 95% confidence interval for each estimate is presented in parentheses. A cross (†) indicates the prevalence estimate was not reported due to low precision.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting quitting and/or reducing smoking for 30 consecutive days in the past year among current smokers; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Quit and/or Reduced Smoking for 30 Consecutive Days in Past Year Among Current Smokers, Q61, Q64, Q68, Q69).

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Total	19.56	(0.63)				
Platform						
Ashore	17.90	(0.73)	[2]	1.14	(0.87, 1.50)	
Afloat	25.56	(1.49)	[1,3]	1.49	(1.10, 2.00)	*
Aviation	18.08	(1.95)	[2]	1.00		
Gender						
Male	21.98	(0.70)	[2]	7.08	(4.83, 10.37)	*
Female	4.32	(0.87)	[1]	1.00		
Pay Grade						
E1-E4	25.55	(1.23)	[2,3,5,]	2.90	(2.07, 4.06)	*
E5-E6	19.69	(1.02)	[1,6]	1.82	(1.31, 2.55)	*
E7-E9	14.34	(1.65)	[1]	1.32	(0.90, 1.93)	
W01-W05	16.18	(3.01)		1.17	(0.71, 1.93)	
O1-O3	13.25	(1.73)	[1]	1.27	(0.84, 1.92)	
O4-O10	9.85	(1.87)	[1,2]	1.00		
Age Group						
18-20	22.19	(4.57)		2.57	(1.27, 5.21)	*
21-25	28.20	(1.57)	[3,4,5]	3.54	(2.13, 5.88)	*
26-35	18.71	(0.96)	[2,5]	2.07	(1.26, 3.42)	*
36-45	14.53	(1.25)	[2]	1.53	(0.91, 2.58)	
46-65	9.98	(2.22)	[2,3]	1.00		
Race/Ethnicity						
White, non-Hispanic	21.79	(0.74)	[2,3]			
African American, non-Hispanic	5.50	(1.58)	[1,4]	0.21	(0.11, 0.38)	*
Hispanic	12.00	(1.50)	[1]	0.49	(0.37, 0.66)	*
Other	19.61	(3.01)	[2]	0.88	(0.60, 1.28)	
Education						
High school or less	26.63	(1.51)	[2,3]	2.59	(2.03, 3.31)	*
Some college	20.08	(0.86)	[1,3]	1.80	(1.45, 2.23)	*
College graduate or higher	12.27	(1.05)	[1,2]	1.00		

Table 4.2.5 – Smokeless Tobacco Users, Past 12 Months – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Family Status						
Not married	22.63	(1.13)	[3]	1.33	(1.13, 1.57)	*
Married, spouse not present	18.02	(2.24)		1.00	(0.73, 1.37)	
Married, spouse present	17.98	(0.79)	[1]	1.00		
Children Living With You						
Yes	17.78	(0.92)	[2]	1.00		
No	20.92	(0.85)	[1]	1.22	(1.04, 1.43)	
Combat Deployed in Past Year						
Yes	24.43	(3.64)		1.37	(0.92, 2.03)	
No	19.10	(0.66)		1.00		
Average Hours of Nightly Sleep						
9+ hours	23.38	(3.77)		1.35	(0.88, 2.07)	
7-8 hours	18.44	(0.97)		1.00		
5-6 hours	19.98	(1.05)		1.10	(0.92, 1.32)	
4 hours or less	19.97	(3.72)		1.10	(0.69, 1.77)	
Overall Stress in Past 12 Months						
High	20.42	(1.08)		1.12	(0.95, 1.33)	
Low	18.58	(0.80)		1.00		
History of Physical Abuse						
Yes	13.60	(1.64)	[2]	0.63	(0.48, 0.84)	*
No	19.89	(0.70)	[1]	1.00		
History of Sexual Abuse						
Yes	11.70	(1.52)	[2]	0.52	(0.39, 0.71)	*
No	20.24	(0.71)	[1]	1.00		
Risk-Taking						
High Risk Taking	28.03	(2.57)	[2]	1.71	(1.31, 2.23)	*
Low-Moderate Risk Taking	18.54	(0.68)	[1]	1.00		

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Religiosity/Spirituality				
High	16.03	(1.19) [2,3]	1.00	
Medium	21.54	(1.13) [1]	1.44	(1.16, 1.79) *
Low	22.68	(1.76) [1]	1.54	(1.18, 2.00) *
Not Applicable	17.73	(1.24)	1.13	(0.89, 1.44)
Vigorous Physical Exercise, Past 30 Days				
Yes	19.64	(0.67)	1.00	
No	18.09	(2.14)	0.90	(0.67, 1.21)
Heavy Alcohol Use, Past 12 Months				
Yes	28.39	(2.59) [2]	1.70	(1.31, 2.22) *
No	18.87	(0.64) [1]	1.00	
Current Smoker				
Yes	32.93	(1.68) [2]	2.51	(2.11, 2.99) *
No	16.36	(0.65) [1]	1.00	
Depression				
High	24.52	(2.99) [2]	1.39	(1.00, 1.93) *
Low	18.94	(0.66) [1]	1.00	
Anxiety				
High	22.08	(2.01)	1.22	(0.96, 1.56)
Low	18.83	(0.69)	1.00	
Anger				
High	25.33	(3.95)	1.43	(0.95, 2.17)
Low	19.15	(0.67)	1.00	
Resilience				
Low resilience	19.12	(3.30)	1.01	(0.65, 1.56)
Moderate resilience	19.46	(0.85)	1.03	(0.86, 1.23)
High resilience	19.03	(1.11)	1.00	
Possible PTS				
Possible PTS	19.67	(4.65)	1.04	(0.58, 1.85)
Unlikely PTS	19.09	(0.66)	1.00	

Table 4.2.5 – Smokeless Tobacco Users, Past 12 Months – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Suicidal Ideation Since Joining Military				
Yes	15.68	(3.46)	0.77	(0.46, 1.29)
No	19.42	(0.66)	1.00	
Self-Inflicted Injury - Lifetime				
Yes	21.41	(2.37)	1.15	(0.86, 1.54)
No	19.11	(0.68)	1.00	
Positive Coping				
Yes	18.80	(0.80)	0.90	(0.76, 1.07)
No	20.42	(1.11)	1.00	
Avoidance Coping				
Yes	18.76	(1.09)	0.95	(0.80, 1.13)
No	19.61	(0.81)	1.00	
Social Network Facilitation - Alcohol				
Yes	20.16	(0.67) [2]	2.86	(1.84, 4.45) *
No	8.12	(1.66) [1]	1.00	
Social Network Facilitation - Cigarettes				
Yes	22.66	(0.80) [2]	2.39	(1.93, 2.95) *
No	10.93	(0.95) [1]	1.00	
Social Network Facilitation - Smokeless				
Yes	26.87	(0.90) [2]	5.09	(4.06, 6.37) *
No	6.73	(0.66) [1]	1.00	
Social Network Facilitation - RxDrugs				
Yes	21.65	(3.13)	1.16	(0.80, 1.67)
No	19.29	(0.65)	1.00	
Leadership Deterrence - Alcohol				
Yes	20.97	(0.93) [2]	1.23	(1.05, 1.45) *
No	17.70	(0.88) [1]	1.00	
Leadership Deterrence - Cigarettes				
Yes	20.10	(0.85)	1.13	(0.96, 1.33)
No	18.19	(0.96)	1.00	

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Leadership Deterrence - Smokeless				
Yes	19.67	(0.87)	1.06	(0.90, 1.24)
No	18.79	(0.95)	1.00	
Leadership Deterrence - RxDrugs				
Yes	19.95	(0.68) [2]	1.72	(1.22, 2.41) *
No	12.66	(1.86) [1]	1.00	
Age of onset for alcohol use				
14 years old or younger	24.53	(1.70) [3,4,5]	7.27	(3.66, 14.43) *
15 to 17 years old	24.48	(1.10) [3,4,5]	7.24	(3.70, 14.19) *
18 to 20 years old	16.50	(1.17) [1,2,5]	4.42	(2.23, 8.74) *
21 years old or older	12.44	(1.35) [1,2,5]	3.17	(1.57, 6.43) *
I never have consumed alcohol	4.28	(1.39) [1,2,3,]	1.00	
Age of onset for tobacco use				
14 years old or younger	28.66	(2.85) [5]	2.90	(2.15, 3.91) *
15 to 17 years old	30.25	(1.85) [5]	3.13	(2.53, 3.86) *
18 to 20 years old	33.39	(2.00) [5]	3.61	(2.91, 4.48) *
21 years old or older	23.60	(2.96) [5]	2.23	(1.58, 3.14) *
I have never smoked cigarettes	12.18	(0.67) [1,2,3,]	1.00	

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as smokeless tobacco users. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting smokeless tobacco users; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Smokeless Tobacco Users, Q72, Q73).

4.3 Prescription Drug Use

The survey included a number of measures of prescription drug use to provide a comprehensive assessment of the extent of both prescription drug use and misuse among active duty USCG members.[23] This section presents the results of a detailed analysis of prescription drug use in the U.S. USCG, including prevalence rates of prescription drug misuse and prescription sedative, pain reliever, stimulant, and anabolic steroid use in the past 12 months. In addition, results show which characteristics demonstrate strong associations with prescription sedative and pain reliever use.[24]

Overview of Findings

4.3.1 *Prescription Drug Use*

Respondents were asked to indicate whether they had used prescription sedatives, pain relievers, stimulants, and/or anabolic steroids in the past 12 months (see Table 4.3.1). Overall, 15.3% of USCG personnel used prescription drugs in the past 12 months. Approximately 0.8% used prescription stimulants or attention enhancers, such as amphetamines, Ritalin, and prescription diet pills. Approximately 6.8% used prescription sedatives, which includes those who reported use of prescription sedatives, tranquilizers, muscle relaxers, or barbiturates. About 13.1% of personnel used prescription pain relievers in the past 12 months, such as Oxycodone, Percocet, cough syrups with codeine, and Methadone. Finally, approximately 0.8% used prescription anabolic steroids, such as Deca Durbolin, or Testosterone.

Table 4.3.1 – Past 12 Month Prescription Drug Use Among USCG Personnel	
Prescription Drug	Percent (SE)
Stimulants	0.8 (0.1)
Sedatives	6.8 (0.4)
Pain Relievers	13.1 (0.5)
Anabolic Steroids	0.8 (0.1)
Any Prescription Drug Use	15.3 (0.6)

Note: Table displays the percentage of USCG personnel who reported prescription stimulant use, sedative use, pain reliever use, and anabolic steroid use in the past 12 months. The standard errors are presented in parentheses.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Prescription Stimulant Use, Q84A; Prescription Sedative Use, Q84B; Precription Pain Reiliever Use, Q84C; Prescription Anabolic Steroid Use, Q84D).

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[23] Definitions for all of the measures reported in this section are explained in Appendix A: Key Definitions and Measures.

[24] Due to the low prevalence rate of stimulant and anabolic steroid use in the past 12 months, only total Coast Guard results are presented. Logistic regressions are not presented for prescription drug misuse, stimulant use, and anabolic steroid use due to low prevalence rates and concern about unstable results.

4.3.2 *Prescription Sedative Use*

Figure 4.3.A presents the relationship of platform to prescription sedative use in the past 12 months, as well as four variables that have strong associations with prescription sedative use in the USCG: age, average hours of nightly sleep, anxiety, and possible PTS. See Table 4.3.2 for the results of our analyses on prescription sedative use.

Figure 4.3.A: Indicators Associated with Prescription Sedative Use[25]
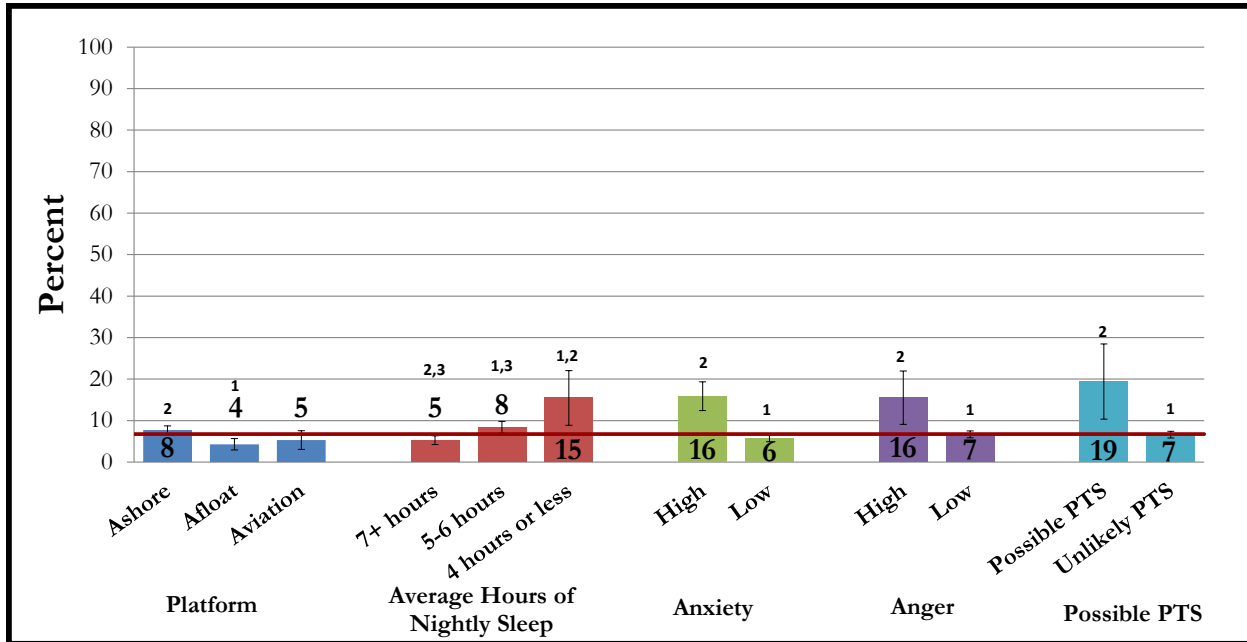
- USCG personnel stationed ashore had a higher prevalence rate of prescription sedative use than those stationed afloat (8% vs. 4%).

- USCG personnel who reported 4 hours or less of nightly sleep had the highest prevalence rate of prescription sedative use compared to those who reported 5 to 6 or 7 or more average hours of nightly sleep (15% vs. 5%-8%).

- USCG personnel who were classified as having high anxiety had a higher prevalence rate of prescription sedative use compared to those who were classified as having low anxiety (16% vs. 6%).

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[25] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group. For example, consider the anxiety bars in this figure:

[1]Indicates estimate is significantly different from the estimate in bar #1 (High anxiety) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in bar #2 (Low anxiety) at the 95% confidence level after Bonferroni adjustment.

- USCG personnel who were classified as having high anger propensity had a higher prevalence rate of prescription sedative use compared to those who were classified as having low anger propensity (16% vs. 7%).

- Those who were classified as having possible PTS had a higher prevalence rate of prescription sedative use than those who were unlikely to be classified as having PTS (19% vs. 7%).

4.3.3 *Prescription Pain Reliever Use*

Figure 4.3.B presents the relationship of platform to prescription pain reliever use in the past 12 months, as well as four variables that have strong associations with prescription pain reliever use in the USCG: age, anxiety, social network facilitation of prescription drug misuse, and age of onset for alcohol use. See Table 4.3.3 for the results of our analyses on prescription pain reliever use.

Figure 4.3.B: Indicators Associated with Prescription Pain Reliever Use[26]
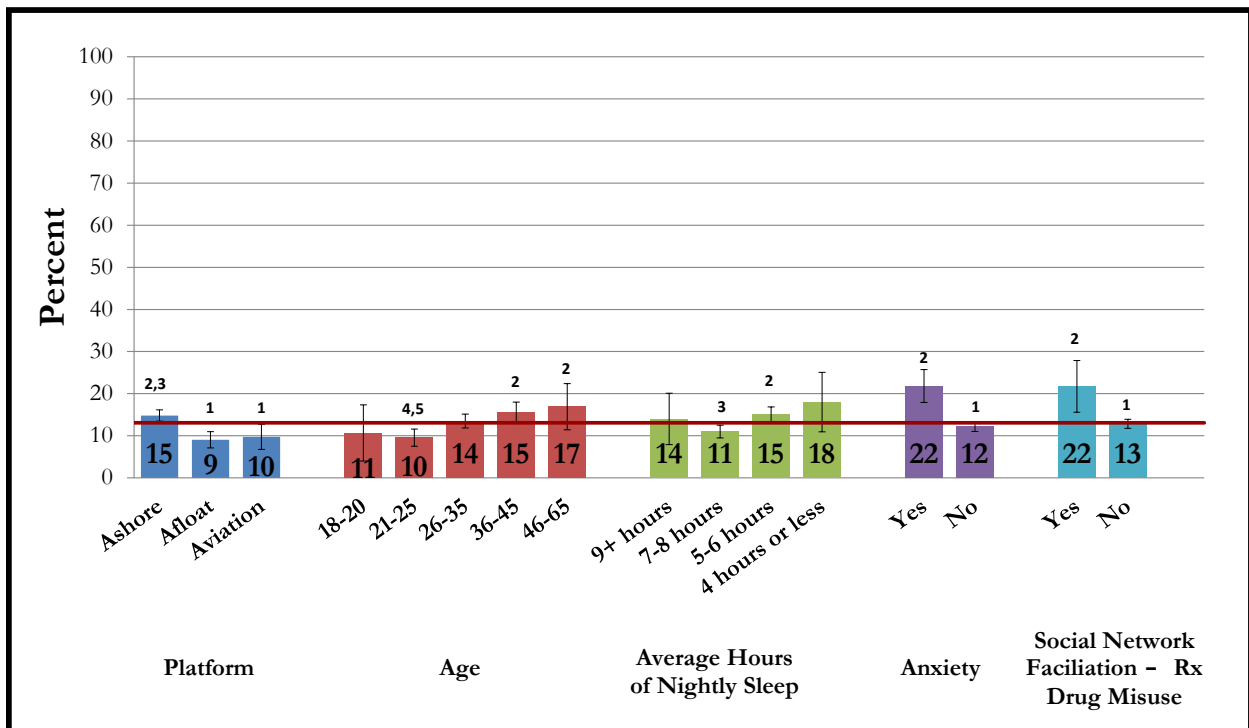
- USCG personnel stationed ashore had the highest prevalence rate of prescription pain reliever use compared to those stationed afloat or aviation (15% vs. 9%-10%).

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[26] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- Age group was associated with prescription pain reliever use, with those between 36 and 65 years old (i.e., 36-45, 46-65) having higher prevalence rates of prescription pain reliever use than those between 21 and 25 years old (15%-17% vs. 10%).

- USCG personnel who reported 5 to 6 average hours of nightly sleep had a higher prevalence rate of prescription pain reliever use compared to those who reported 7 to 8 average hours of nightly sleep (15% vs. 11%).

- USCG personnel who were classified as having high anxiety had a higher prevalence rate of prescription pain reliever use compared to those who were classified as having low anxiety (22% vs. 12%).

- USCG personnel who reported social network facilitation of prescription drug misuse had a higher prevalence rate of prescription pain reliever use than those who did not report social network facilitation of prescription drug misuse (22% vs. 13%).

4.3.4 *Prescription Drug Misuse*

To measure misuse of prescription drugs, respondents were asked a series of questions pertaining to the prescription target (i.e., who the drug was prescribed for), the amount used, and the motivation for use. Each of these questions was asked in the timeframe of the past year. Respondents were considered to be misusing a drug if they indicated that they were using a drug:

(1) that was not prescribed for them,

(2) "to feel good" or "get high," or

(3) in larger dosages than prescribed for them.

Analyses showed that less than 1% of active duty USCG personnel (0.71%) were classified as engaging in prescription drug misuse in the past 12 months (see Table 4.3.4), including misuse of prescription stimulants, sedatives, pain relievers, or steroids.[27]

4.3.5 *Interpretations and Recommendations*

High anxiety was a strong covariate of both prescription sedative and prescription pain reliever use. USCG personnel who were classified as having high anxiety had a higher rate of both prescription sedative use and prescription pain reliever use than those who were classified as having low anxiety. These findings stress the importance of identification and treatment of psychological health issues.

Analyses showed that average hours of nightly sleep were strongly associated with both prescription sedative and prescription pain reliever use. USCG personnel who reported 4 hours or less of average

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[27] Due to the low incidence of prescription drug misuse, logistic regression results are not presented in Table 4.3.4.

nightly sleep had a higher prevalence rate of prescription sedative use compared to those who reported 5 or more hours of average nightly sleep. Similarly, those who reported 5 to 6 hours of average nightly sleep had a higher prevalence rate of prescription pain reliever use than those who reported 7 to 8 hours of average nightly sleep. These findings highlight the importance of identifying and providing resources for those who are sleeping too much or too little to identify the root cause(s), whether psychological or physical.

Less than 1% of USCG personnel admittedly used prescription stimulants or prescription anabolic steroids in the past 12 months. Finally, less than 1% of USCG personnel were classified as misusing prescription drugs, including stimulants, sedatives, pain relievers, or anabolic steroids, in the past 12 months. CG-11 is cautious with making any interpretations or recommendations with these findings. With less than 1% of USCG personnel being classified as having engaged in prescription drug misuse, it is possible that members participating in this online survey felt that they could be tracked electronically. Comparisons with other military surveys using the same or similar methods will be needed to confirm and validate these findings. CG-11 recommends that results are compared by survey mode (i.e., web or paper) on this element and to other prescription drug studies in the Armed Forces.[28]

Tables

The following tables present an in-depth analysis of prescription drug use in the USCG.

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[28] The 2011 Status of Drug Use in the DoD Personnel report provided results on illicit drug use using biospecimen drug screenings; similar research should be considered for monitoring prescription drug misuse.

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Total	6.8	(0.40)				
Platform						
Ashore	7.75	(0.51)	2	1.48	(0.94, 2.32)	
Afloat	4.28	(0.70)	1	0.92	(0.54, 1.55)	
Aviation	5.30	(1.15)		1.00		
Gender						
Male	6.15	(0.41)	2	0.54	(0.42, 0.71)	*
Female	10.68	(1.33)	1	1.00		
Pay Grade						
E1-E4	5.52	(0.65)		0.88	(0.56, 1.38)	
E5-E6	7.36	(0.68)		1.29	(0.84, 1.97)	
E7-E9	7.44	(1.24)		1.35	(0.83, 2.19)	
W01-W05	7.33	(2.18)		1.45	(0.79, 2.67)	
O1-O3	7.59	(1.36)		1.14	(0.68, 1.91)	
O4-O10	6.74	(1.59)		1.00		
Age Group						
18-20	3.71	(2.08)		0.33	(0.10, 1.15)	
21-25	5.41	(0.80)		0.50	(0.28, 0.88)	*
26-35	6.83	(0.63)		0.64	(0.38, 1.07)	
36-45	8.00	(0.98)		0.76	(0.44, 1.30)	
46-65	10.32	(2.27)		1.00		
Race/Ethnicity						
White, non-Hispanic	6.74	(0.45)		1.00		
African American, non-Hispanic	6.01	(1.67)		0.89	(0.49, 1.61)	
Hispanic	7.48	(1.24)		1.12	(0.77, 1.63)	
Other	6.11	(1.83)		0.90	(0.48, 1.71)	
Education						
High school or less	5.29	(0.77)		0.74	(0.50, 1.10)	
Some college	7.25	(0.56)		1.04	(0.77, 1.40)	
College graduate or higher	7.00	(0.82)		1.00		

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Family Status					
Not married	5.90	(0.64)		0.81	(0.61, 1.07)
Married, spouse not present	7.50	(1.55)		1.05	(0.66, 1.67)
Married, spouse present	7.19	(0.54)		1.00	
Children Living With You					
Yes	7.58	(0.64)		1.00	
No	6.15	(0.51)		0.80	(0.62, 1.03)
Combat Deployed in Past Year					
Yes	8.15	(2.32)		1.19	(0.64, 2.22)
No	6.92	(0.43)		1.00	
Average Hours of Nightly Sleep					
9+ hours	4.42	(1.83)	[4]	0.82	(0.34, 1.95)
7-8 hours	5.36	(0.56)	[3,4]	1.00	
5-6 hours	8.40	(0.73)	[2]	1.62	(1.22, 2.16)	*
4 hours or less	15.46	(3.36)	[1,2]	3.23	(1.87, 5.58)	*
Overall Stress in Past 12 Months					
High	9.13	(0.77)	[2]	1.72	(1.34, 2.22)	*
Low	5.51	(0.47)	[1]	1.00	
History of Physical Abuse					
Yes	9.96	(1.43)	[2]	1.61	(1.14, 2.27)	*
No	6.43	(0.43)	[1]	1.00	
History of Sexual Abuse					
Yes	10.71	(1.46)	[2]	1.77	(1.27, 2.47)	*
No	6.33	(0.43)	[1]	1.00	
Risk-Taking					
High Risk Taking	6.33	(1.39)		0.89	(0.55, 1.44)
Low-Moderate Risk Taking	7.02	(0.45)		1.00	
Religiosity/Spirituality					
High	6.90	(0.82)		1.00	
Medium	7.06	(0.71)		1.02	(0.74, 1.42)
Low	6.07	(1.00)		0.87	(0.57, 1.34)
Not Applicable	6.88	(0.82)		1.00	(0.70, 1.42)

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Vigorous Physical Exercise, Past 30 Days						
Yes	6.33	(0.41)	[2]	1.00		
No	11.83	(1.81)	[1]	1.98	(1.38, 2.86)	*
Heavy Alcohol Use, Past 12 Months						
Yes	9.61	(1.72)	[2]	1.52	(1.01, 2.28)	*
No	6.55	(0.41)	[1]	1.00		
Current Smoker						
Yes	7.54	(0.96)		1.15	(0.85, 1.56)	
No	6.60	(0.44)		1.00		
Depression						
High	13.01	(2.34)	[2]	2.17	(1.42, 3.32)	*
Low	6.46	(0.42)	[1]	1.00		
Anxiety						
High	15.90	(1.77)	[2]	3.11	(2.31, 4.19)	*
Low	5.73	(0.41)	[1]	1.00		
Anger						
High	15.52	(3.29)	[2]	2.57	(1.55, 4.27)	*
Low	6.68	(0.43)	[1]	1.00		
Resilience						
Low resilience	7.08	(2.16)		1.23	(0.62, 2.43)	
Moderate resilience	7.67	(0.57)		1.34	(1.01, 1.78)	*
High resilience	5.84	(0.66)		1.00		
Possible PTS						
Possible PTS	19.42	(4.62)	[2]	3.40	(1.89, 6.14)	*
Unlikely PTS	6.61	(0.42)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	12.03	(3.10)	[2]	1.90	(1.06, 3.41)	*
No	6.73	(0.42)	[1]	1.00		

Table 4.3.2 – Prescription Sedative Use, Past 12 Months – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Self-Inflicted Injury - Lifetime				
Yes	8.52	(1.61)	1.29	(0.84, 1.98)
No	6.73	(0.43)	1.00	
Positive Coping				
Yes	6.48	(0.50)	0.86	(0.66, 1.12)
No	7.45	(0.73)	1.00	
Avoidance Coping				
Yes	6.77	(0.70)	0.97	(0.75, 1.27)
No	6.94	(0.52)	1.00	
Social Network Facilitation - Alcohol				
Yes	6.97	(0.43)	1.75	(0.95, 3.24)
No	4.09	(1.20)	1.00	
Social Network Facilitation - Cigarettes				
Yes	6.97	(0.48)	1.14	(0.85, 1.52)
No	6.17	(0.73)	1.00	
Social Network Facilitation - Smokeless				
Yes	6.18	(0.49)	0.80	(0.62, 1.03)
No	7.64	(0.70)	1.00	
Social Network Facilitation - RxDrugs				
Yes	10.82	(2.36) [2]	1.73	(1.05, 2.84) *
No	6.57	(0.41) [1]	1.00	
Leadership Deterrence - Alcohol				
Yes	6.42	(0.56)	0.87	(0.68, 1.13)
No	7.27	(0.60)	1.00	
Leadership Deterrence - Cigarettes				
Yes	6.92	(0.54)	1.04	(0.81, 1.35)
No	6.65	(0.62)	1.00	
Leadership Deterrence - Smokeless				
Yes	6.84	(0.55)	1.01	(0.78, 1.30)
No	6.79	(0.61)	1.00	

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Leadership Deterrence - RxDrugs					
Yes	6.57	(0.42)	0.70	(0.47, 1.04)	
No	9.17	(1.61)	1.00		
Age of onset for alcohol use					
14 years old or younger	8.06	(1.09)	2.26	(1.04, 4.88)	*
15 to 17 years old	7.72	(0.69)	2.15	(1.03, 4.52)	*
18 to 20 years old	5.88	(0.75)	1.61	(0.75, 3.45)	
21 years old or older	5.66	(0.96)	1.54	(0.70, 3.43)	
I have never consumed any alcohol	3.74	(1.32)	1.00		
Age of onset for tobacco use					
14 years old or younger	11.05	(2.00) [5]	1.98	(1.28, 3.05)	*
15 to 17 years old	8.09	(1.10)	1.40	(1.00, 1.96)	
18 to 20 years old	6.74	(1.08)	1.15	(0.79, 1.68)	
21 years old or older	7.65	(1.87)	1.32	(0.76, 2.27)	
I have never smoked cigarettes	5.91	(0.49) [1]	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who reported prescription sedative use in the past 12 months. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting prescription sedative use in the past 12 months; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Prescription Sedative Use, Q84B).

Table 4.3.3 – Prescription Pain Reliever Use, Past 12 Months – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG					
	Prevalence			Odds Ratio[b] (95% CI)		
Total	13.1	(0.54)				
Platform						
Ashore	14.81	(0.68)	[2,3]	1.67	(1.18, 2.37)	*
Afloat	9.05	(0.99)	[1]	1.10	(0.74, 1.65)	
Aviation	9.76	(1.52)	[1]	1.00		
Gender						
Male	12.36	(0.57)	[2]	0.70	(0.56, 0.87)	*
Female	17.69	(1.65)	[1]	1.00		
Pay Grade						
E1-E4	11.38	(0.90)		0.94	(0.67, 1.31)	
E5-E6	14.67	(0.92)		1.24	(0.90, 1.70)	
E7-E9	13.60	(1.62)		1.14	(0.79, 1.65)	
W01-W05	15.30	(3.02)		1.43	(0.90, 2.27)	
O1-O3	12.16	(1.68)		0.98	(0.66, 1.47)	
O4-O10	11.54	(2.02)		1.00		
Age Group						
18-20	10.68	(3.40)		0.59	(0.27, 1.30)	
21-25	9.55	(1.04)	[4,5]	0.52	(0.33, 0.82)	*
26-35	13.50	(0.85)		0.77	(0.51, 1.16)	
36-45	15.45	(1.30)	[2]	0.90	(0.58, 1.39)	
46-65	16.91	(2.80)	[2]	1.00		
Race/Ethnicity						
White, non-Hispanic	12.72	(0.60)		1.00		
African American, non-Hispanic	11.76	(2.26)		0.91	(0.59, 1.42)	
Hispanic	14.94	(1.67)		1.21	(0.91, 1.59)	
Other	15.91	(2.80)		1.30	(0.85, 1.98)	
Education						
High school or less	11.48	(1.10)		0.92	(0.69, 1.23)	
Some college	14.06	(0.75)		1.16	(0.93, 1.46)	
College graduate or higher	12.35	(1.06)		1.00		

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Family Status					
Not married	12.06	(0.89)		0.87	(0.71, 1.06)	
Married, spouse not present	13.26	(1.99)		0.96	(0.67, 1.38)	
Married, spouse present	13.69	(0.72)		1.00		
Children Living With You					
Yes	14.47	(0.85)	[2]	1.00		
No	12.04	(0.69)	[1]	0.81	(0.67, 0.97)	*
Combat Deployed in Past Year					
Yes	15.77	(3.09)		1.23	(0.77, 1.95)	
No	13.22	(0.57)		1.00		
Average Hours of Nightly Sleep					
9+ hours	14.20	(3.11)		1.34	(0.79, 2.25)	
7-8 hours	11.01	(0.78)	[3]	1.00		
5-6 hours	15.48	(0.95)	[2]	1.48	(1.20, 1.83)	*
4 hours or less	18.41	(3.60)		1.82	(1.11, 2.99)	*
Overall Stress in Past 12 Months					
High	16.52	(1.00)	[2]	1.52	(1.26, 1.84)	*
Low	11.51	(0.65)	[1]	1.00		
History of Physical Abuse					
Yes	16.16	(1.76)		1.30	(0.99, 1.71)	
No	12.89	(0.59)		1.00		
History of Sexual Abuse					
Yes	18.17	(1.82)	[2]	1.53	(1.18, 1.98)	*
No	12.69	(0.58)	[1]	1.00		
Risk-Taking					
High Risk Taking	12.48	(1.89)		0.92	(0.65, 1.31)	
Low-Moderate Risk Taking	13.43	(0.60)		1.00		

Table 4.3.3 – Prescription Pain Reliever Use, Past 12 Months– Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Religiosity/Spirituality					
High	14.41	(1.14)		1.00	
Medium	12.92	(0.92)		0.88	(0.69, 1.12)
Low	12.86	(1.41)		0.88	(0.65, 1.19)
Not Applicable	13.10	(1.10)		0.90	(0.69, 1.16)
Vigorous Physical Exercise, Past 30					
Yes	12.46	(0.56)	[2]	1.00	
No	19.55	(2.22)	[1]	1.71	(1.27, 2.29) *
Heavy Alcohol Use, Past 12 Months					
Yes	13.11	(1.97)		1.00	(0.70, 1.42)
No	13.11	(0.56)		1.00	
Current Smoker					
Yes	13.84	(1.25)		1.08	(0.86, 1.36)
No	12.93	(0.60)		1.00	
Depression					
High	19.65	(2.76)	[2]	1.64	(1.15, 2.34) *
Low	12.97	(0.57)	[1]	1.00	
Anxiety					
High	21.80	(2.00)	[2]	2.02	(1.57, 2.59) *
Low	12.15	(0.57)	[1]	1.00	
Anger					
High	20.24	(3.65)	[2]	1.67	(1.06, 2.63) *
Low	13.17	(0.58)	[1]	1.00	
Resilience					
Low resilience	16.28	(3.10)		1.46	(0.90, 2.34)
Moderate resilience	14.14	(0.75)		1.23	(1.00, 1.52)
High resilience	11.79	(0.91)		1.00	
Possible PTS					
Possible PTS	21.73	(4.82)	[2]	1.84	(1.05, 3.22) *
Unlikely PTS	13.13	(0.56)	[1]	1.00	

Table 4.3.3 – Prescription Pain Reliever Use, Past 12 Months– Prevalence Rates and Odds Ratios

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Suicidal Ideation Since Joining Military				
Yes	17.87	(3.65)	1.45	(0.88, 2.37)
No	13.08	(0.56)	1.00	
Self-Inflicted Injury - Lifetime				
Yes	16.32	(2.13)	1.31	(0.95, 1.81)
No	12.97	(0.58)	1.00	
Positive Coping				
Yes	13.18	(0.69)	0.99	(0.81, 1.21)
No	13.31	(0.94)	1.00	
Avoidance Coping				
Yes	13.68	(0.96)	1.05	(0.86, 1.28)
No	13.09	(0.68)	1.00	
Social Network Facilitation - Alcohol				
Yes	13.57	(0.57) [2]	1.53	(1.00, 2.33) *
No	9.31	(1.77) [1]	1.00	
Social Network Facilitation - Cigarettes				
Yes	13.74	(0.65)	1.17	(0.95, 1.45)
No	11.96	(0.99)	1.00	
Social Network Facilitation - Smokeless				
Yes	13.22	(0.69)	1.00	(0.82, 1.21)
No	13.25	(0.90)	1.00	
Social Network Facilitation - RxDrugs				
Yes	21.73	(3.13) [2]	1.89	(1.30, 2.74) *
No	12.83	(0.55) [1]	1.00	
Leadership Deterrence - Alcohol				
Yes	13.16	(0.77)	0.96	(0.80, 1.16)
No	13.61	(0.79)	1.00	
Leadership Deterrence - Cigarettes				
Yes	13.63	(0.73)	1.06	(0.88, 1.28)
No	12.97	(0.84)	1.00	

Table 4.3.3 – Prescription Pain Reliever Use, Past 12 Months– Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Leadership Deterrence - Smokeless					
Yes	13.63	(0.75)	1.06	(0.88, 1.28)	
No	12.99	(0.82)	1.00		
Leadership Deterrence - RxDrugs					
Yes	13.14	(0.57)	0.90	(0.65, 1.24)	
No	14.45	(1.97)	1.00		
Age of onset for alcohol use					
14 years old or younger	14.10	(1.39)	1.80	(1.05, 3.10)	*
15 to 17 years old	14.57	(0.91)	1.87	(1.12, 3.13)	*
18 to 20 years old	12.85	(1.06)	1.62	(0.96, 2.74)	
21 years old or older	10.68	(1.28)	1.31	(0.75, 2.30)	
I have never consumed any alcohol	8.34	(1.92)	1.00		
Age of onset for tobacco use					
14 years old or younger	13.43	(2.18)	1.14	(0.78, 1.68)	
15 to 17 years old	15.23	(1.46)	1.32	(1.03, 1.71)	*
18 to 20 years old	13.40	(1.47)	1.14	(0.86, 1.50)	
21 years old or older	18.67	(2.74)	1.69	(1.16, 2.46)	*
I have never smoked cigarettes	11.96	(0.67)	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who reported prescription pain reliever use in the past 12 months. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting prescription pain reliever use in the past 12 months; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Prescription Pain Reliever Use, Q84C).

Table 4.3.4 – Prescription Drug Misuse – Prevalence Rates	USCG	
Characteristic[a]	Prevalence	
Total	0.71	(0.13)
Platform		
Ashore	0.79	(0.17)
Afloat	0.45	(0.23)
Aviation	0.71	(0.43)
Gender		
Male	0.64	(0.14)
Female	1.15	(0.46)
Pay Grade		
E1-E4	0.98	(0.28)
E5-E6	0.65	(0.21)
E7-E9	0.25	(0.23)
W01-W05	†	
O1-O3	0.86	(0.48)
O4-O10	0.70	(0.53)
Age Group		
18-20	1.58	(1.37)
21-25	0.39	(0.22)
26-35	0.95	(0.24)
36-45	0.59	(0.27)
46-65	†	
Race/Ethnicity		
White, non-Hispanic	0.65	(0.14)
African American, non-Hispanic	†	
Hispanic	1.29	(0.53)
Other	1.08	(0.79)
Education		
High school or less	0.91	(0.33)
Some college	0.54	(0.16)
College graduate or higher	0.91	(0.31)

Table 4.3.4 – Prescription Drug Misuse – Prevalence Rates	USCG		
Characteristic[a]	**Prevalence**		
Family Status			
Not married	1.18	(0.29)	[3]
Married, spouse not present	2.26	(0.87)	[3]
Married, spouse present	0.24	(0.10)	[1,2]
Children Living With You			
Yes	0.23	(0.11)	[2]
No	1.08	(0.22)	[1]
Combat Deployed in Past Year			
Yes	1.29	(0.95)	
No	0.72	(0.14)	
Average Hours of Nightly Sleep			
9+ hours	0.95	(0.86)	
7-8 hours	0.78	(0.22)	
5-6 hours	0.78	(0.22)	
4 hours or less	0.42	(0.60)	
Overall Stress in Past 12 Months			
High	1.18	(0.29)	[2]
Low	0.48	(0.14)	[1]
History of Physical Abuse			
Yes	0.50	(0.34)	
No	0.76	(0.15)	
History of Sexual Abuse			
Yes	0.59	(0.36)	
No	0.75	(0.15)	
Risk-Taking			
High Risk Taking	2.13	(0.82)	[2]
Low-Moderate Risk Taking	0.59	(0.13)	[1]
Religiosity/Spirituality			
High	0.51	(0.23)	
Medium	0.82	(0.25)	
Low	0.71	(0.35)	
Not Applicable	0.87	(0.30)	

Table 4.3.4 – Prescription Drug Misuse – Prevalence Rates		
Characteristic[a]	**USCG**	
	Prevalence	
Vigorous Physical Exercise, Past 30 Days		
Yes	0.80	(0.15)
No	†	
Heavy Alcohol Use, Past 12 Months		
Yes	2.68	(0.94) [2]
No	0.55	(0.12) [1]
Current Smoker		
Yes	0.79	(0.32)
No	0.69	(0.15)
Depression		
High	1.64	(0.88)
Low	0.66	(0.14)
Anxiety		
High	1.90	(0.66) [2]
Low	0.58	(0.13) [1]
Anger		
High	2.97	(1.54) [2]
Low	0.65	(0.14) [1]
Resilience		
Low resilience	2.83	(1.39) [2,3]
Moderate resilience	0.71	(0.18) [1]
High resilience	0.52	(0.20) [1]
Possible PTS		
Possible PTS	3.97	(2.28) [2]
Unlikely PTS	0.64	(0.13) [1]
Suicidal Ideation Since Joining Military		
Yes	2.14	(1.38)
No	0.66	(0.14)
Self-Inflicted Injury - Lifetime		
Yes	1.67	(0.74) [2]
No	0.62	(0.14) [1]

Table 4.3.4 – Prescription Drug Misuse – Prevalence Rates	USCG	
Characteristic[a]	Prevalence	
Positive Coping		
Yes	0.74	(0.18)
No	0.70	(0.23)
Avoidance Coping		
Yes	0.69	(0.23)
No	0.74	(0.17)
Social Network Facilitation - Alcohol		
Yes	0.75	(0.14)
No	0.44	(0.40)
Social Network Facilitation - Cigarettes		
Yes	0.81	(0.17)
No	0.52	(0.22)
Social Network Facilitation - Smokeless		
Yes	0.73	(0.17)
No	0.72	(0.22)
Social Network Facilitation - RxDrugs		
Yes	3.45	(1.39) [2]
No	0.60	(0.13) [1]
Leadership Deterrence - Alcohol		
Yes	0.56	(0.17)
No	0.91	(0.22)
Leadership Deterrence - Cigarettes		
Yes	0.56	(0.16)
No	0.96	(0.24)
Leadership Deterrence - Smokeless		
Yes	0.48	(0.15) [2]
No	1.04	(0.25) [1]
Leadership Deterrence - RxDrugs		
Yes	0.65	(0.14) [2]
No	1.64	(0.71) [1]

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Table 4.3.4 – Prescription Drug Misuse – Prevalence Rates	USCG	
Characteristic[a]	Prevalence	
Age of onset for alcohol use		
14 years old or younger	0.56	(0.30)
15 to 17 years old	0.94	(0.25)
18 to 20 years old	0.49	(0.22)
21 years old or older	0.52	(0.30)
I have never consumed any alcohol	1.21	(0.76)
Age of onset for tobacco use		
14 years old or younger	1.10	(0.67)
15 to 17 years old	0.19	(0.17)
18 to 20 years old	1.08	(0.45)
21 years old or older	0.94	(0.68)
I have never smoked cigarettes	0.70	(0.17)

Note: Table displays the percentages of USCG personnel, by sociodemographic and other characteristics of interest, who reported prescription drug misuse in the past 12 months. The standard error for each estimate is presented in parentheses. A cross (†) indicates the prevalence estimate was not reported due to low precision.

[a]Significance tests were conducted between all rows within the same characteristic of interest. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Prescription Drug Misuse, Q84, Q86B_A-D, Q87, Q89).

Chapter 5: Stress and Psychological Health

This chapter presents the results of a detailed analysis of various indicators of stress and psychological health, including resilience, overall stress, depression, posttraumatic stress (PTS), anxiety, anger, suicidal ideation and/or attempts, and previous experience of physical or sexual abuse. This chapter describes prevalence rates and investigates covariates of each measure. Tables presenting results for each outcome measure are at the end of the chapter. Figures are also presented which show prevalence rates by platform, and four variables that exhibit strong relationships with each outcome variable (i.e., strong odds ratio in comparison to the reference category). The overall prevalence rate for each outcome measure is also displayed as a red horizontal line in each figure.[1]

Overview of Findings

5.1 Resilience

Respondents were asked six items about resilience – three related to confidence in overcoming challenges and three related to enjoyment of challenges. Responses were provided on a 5-point scale, ranging from "Not at all" to "A great deal." Responses to these six items were recoded (i.e., "A great deal" was assigned a value of 1, "A lot" was assigned a value of .75, "Somewhat" was assigned a value of .5, "A little" was assigned a value of .25, and "Not at all" was assigned a value of 0), and averages were calculated separately for both resilience confidence and resilience enjoyment. These scores were then averaged, and resilience level was separated into three groups – Low (average score of .25 or less), moderate (average score of .25 to .75), and high (average score of .75 or higher) resilience.

Over one-third (35%) of active duty USCG personnel were classified as having high resilience (see Table 5.1).[2] Figure 5.A presents the relationship of platform to high resilience, as well as four variables that have strong associations with high resilience in the USCG: risk-taking, depression, anxiety, and positive coping.

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[1] Comparisons were not made with civilian studies given the vast array of ways to measure indicators of psychological health and differences in study methodologies. Comparisons with civilian studies should be made with caution.
[2] Four percent were classified as having low resilience and 61% as having moderate resilience.

Figure 5.A: Indicators Associated with High Resilience[3]
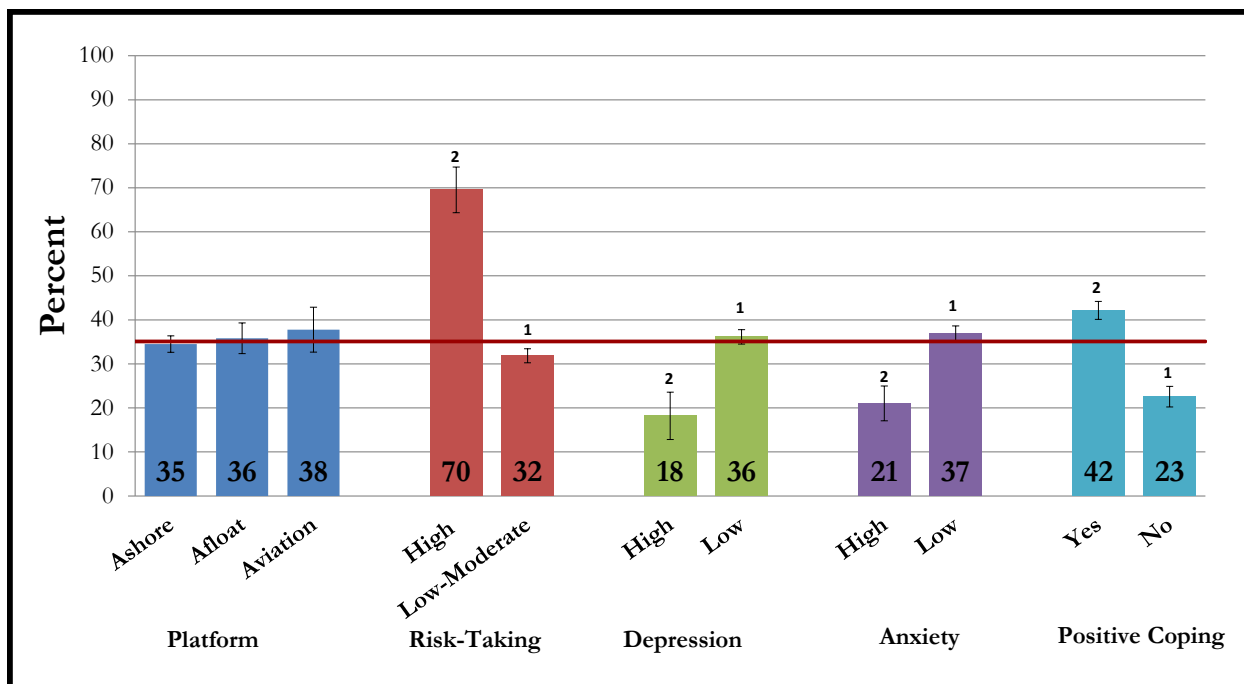
- There were no significant differences in high resilience by platform.

- USCG personnel with a low to moderate risk-taking propensity had a lower rate of high resilience than those with a high risk-taking propensity (32% vs. 70%).

- USCG personnel who were classified as having high depression had a lower rate of high resilience compared to those who were classified as having low depression (18% vs. 36%).

- USCG personnel who were classified as having high anxiety had a lower prevalence rate of high resilience compared to those who were classified as having low anxiety (21% vs. 37%).

- Positive coping was associated with high resilience, with those who reported employing positive coping strategies having a higher prevalence of high resilience than those who did not report employing positive coping strategies (42% vs. 23%).

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[3] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group. For example, consider the risk-taking bars in this figure:

[1] Indicates estimate is significantly different from the estimate in bar #1 (High risk-taking) at the 95% confidence level after Bonferroni adjustment.
[2] Indicates estimate is significantly different from the estimate in bar #2 (Low-moderate risk-taking) at the 95% confidence level after Bonferroni adjustment.

5.2 Overall Stress

Respondents were asked two items to measure their level of overall stress in the past 12 months. The first question asked participants to indicate how often they experienced a lot of stress in the past 12 months. Responses were provided on a 5-point scale, ranging from "Never" to "Always." The second question asked participants to indicate how much military-related stress they experienced overall in the past 12 months. Responses were provided on a 4-point scale, ranging from "None at all" to "A lot." Average scores were calculated for each item separately; these scores were then averaged together. Overall stress level was dichotomized based on a cutoff value. Those participants with an average score of 0.70 or greater were classified as having "High overall stress," whereas those with an average score of less than 0.70 were classified as having "Low overall stress."

Approximately 37% of active duty USCG personnel were classified as having high overall stress (see Table 5.2). Figure 5.B presents the relationship between high overall stress and platform, along with four variables strongly associated with high overall stress: depression, anxiety, anger, and posttraumatic stress (PTS).

Figure 5.B: Indicators Associated with High Overall Stress[4]
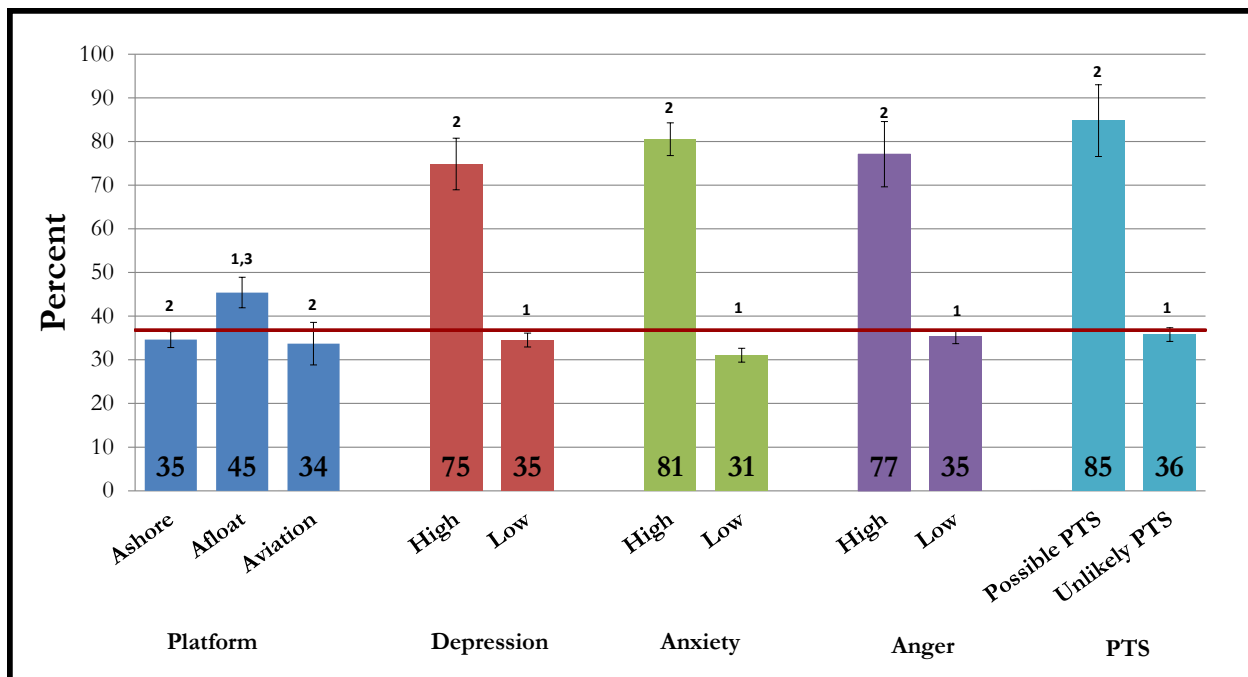
- USCG personnel who were stationed afloat had the highest prevalence rate of high overall stress compared to those stationed ashore or in an aviation setting (45% vs. 34%-35%).

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[4] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- USCG personnel who were classified as having high depression had a higher rate of high overall stress than those who were classified as having low depression (75% vs. 35%).

- USCG personnel who were classified as having high anxiety had a higher prevalence rate of high overall stress than those who were classified as having low anxiety (81% vs. 31%).

- USCG personnel who were classified as having high anger had a higher rate of high overall stress than those who were classified as having low anger (77% vs. 35%).

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of high overall stress than personnel who were unlikely to be classified as having PTS (85% vs. 36%).

5.3 Depression

Respondents were asked two items to assess their level of depressive symptoms in the past week; these items were "I felt depressed" and "I felt sad." Response options were provided on a 5-point scale, ranging from "Never" to "5-7 days." To create a depression level scale, the responses were recoded (i.e., "5-7 days" was assigned a value of 1, "3-4 days" was assigned a value of .75, "1-2 days" was assigned a value of .5, "Less than 1 day" was assigned a value of .25, and "never" was assigned a value of 0) and averaged. Depression level was then dichotomized based on a cutoff value. Those with an average score of 0.75 or greater were classified as "High depression," whereas those with an average score of less than 0.75 were classified as "Low depression."

Approximately 6% of active duty USCG personnel were classified as having high depression (see Table 5.3). In comparison, almost 10% of the Armed Forces were classified as having high depression (9% of males and 12% of females).[5] Figure 5.C presents the association between platform and high depression, in addition to four variables strongly associated with high depression in the USCG: age, average hours of nightly sleep, anxiety, and PTS.

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[5] Barlas, F. M., Higgins, W. B., Pflieger, J. C., & Diecker, K. (2013). *2011 Health Related Behaviors Survey of Active Duty Military Personnel.*

Figure 5.C: Indicators Associated with High Depression[6]
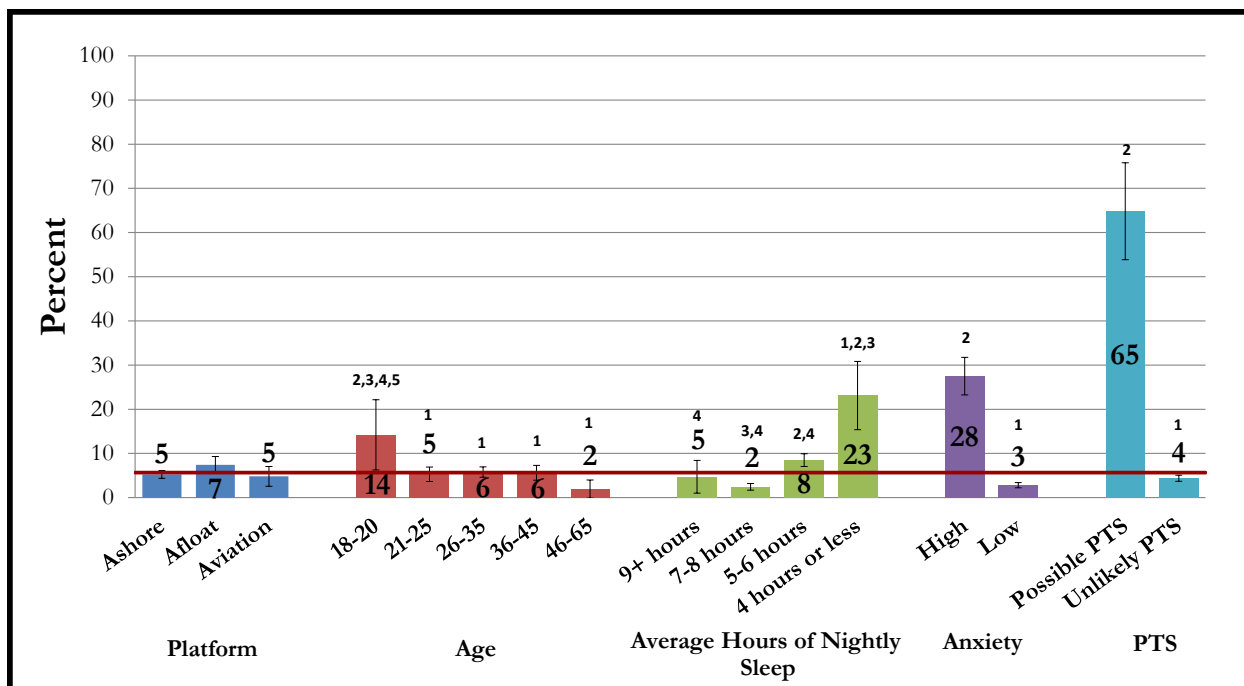
- There were no significant differences in being classified as having high depression by platform.

- USCG personnel in the 18 to 20 age group had the highest rate of high depression compared to service members 21 years of age and older (i.e., 21-25, 26-35, 36-45, and 46-65) (14% vs. 2%-6%).

- USCG members who reported an average of 4 hours of sleep or less per night had the highest rate of high depression compared to those who reported an average of 5 or more hours of sleep per night (i.e., 5-6 hours, 7-8 hours, and 9+ hours) (23% vs. 2%-8%).

- USCG personnel who were classified as having high anxiety had a higher prevalence rate of high depression compared to personnel who were classified as having low anxiety (28% vs. 3%).

- USCG personnel who were classified as having possible PTS had a substantially higher prevalence rate of high depression than personnel who were unlikely to be classified as having PTS (65% vs. 4%).

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[6] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

5.4 Posttraumatic Stress (PTS)

Respondents were asked four items to determine the extent to which they experienced symptoms in the past 30 days that indicated need for further PTS evaluation (Blanchard et al., 1996). Participants were asked how much they had been bothered by each of four symptoms in the past month, including "feeling very upset when something reminded you of a stressful experience," "feeling emotionally numb or being unable to have loving feelings for those close to you," "having difficulty concentrating," and "feeling jumpy or easily startled." Responses were provided on a 5-point scale, ranging from "Not at all" to "Extremely." To create this scale, an average was calculated from participants' responses to each of the four items, and then a dichotomous cut off was used. Respondents with scores below 4.0 were categorized as "Unlikely PTS," and those with scores of 4.0 and above were categorized as "Possible PTS."

Approximately 2% of active duty USCG personnel were classified as having possible PTS (see Table 5.4). In comparison, 5% of the Armed Forces were classified as having possible PTS.[7] Figure 5.D presents the association between possible PTS and platform, as well as four variables strongly associated with having possible PTS in the USCG: average hours of nightly sleep, depression, anxiety, and anger.

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[7] Barlas, F. M., Higgins, W. B., Pflieger, J. C., & Diecker, K. (2013). *2011 Health Related Behaviors Survey of Active Duty Military Personnel.*

Figure 5.D: Indicators Associated with Possible PTS[8]
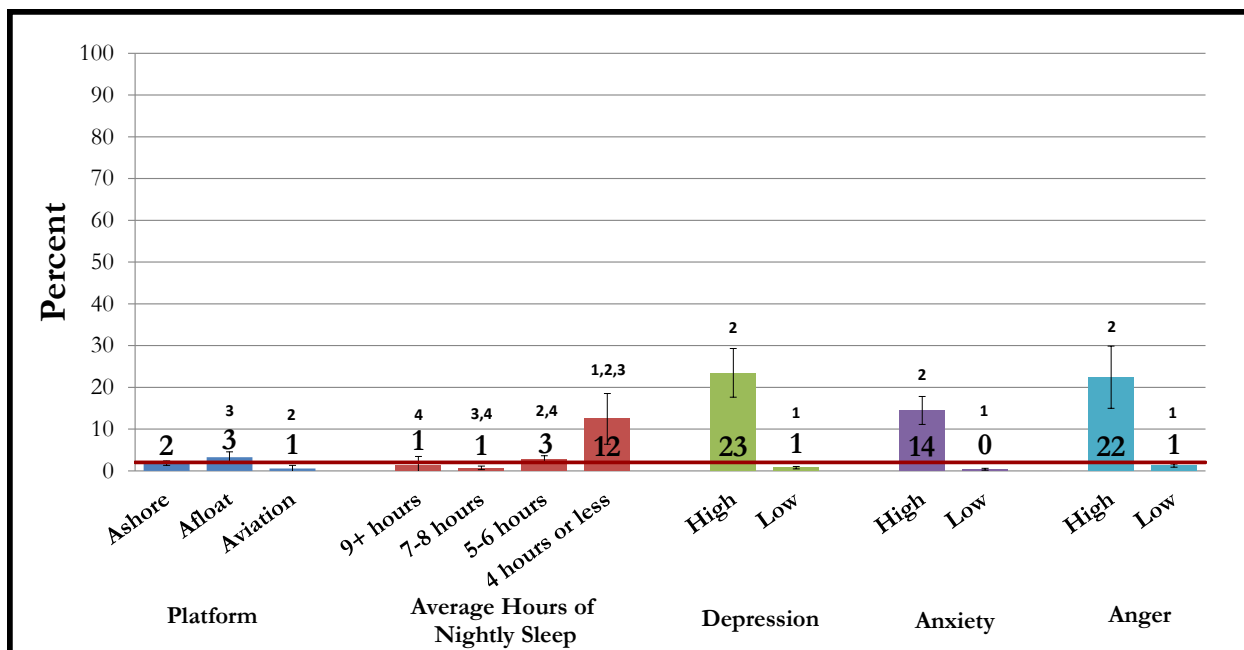
- USCG personnel who were stationed afloat had a higher prevalence rate of being classified as having possible PTS than those stationed in an aviation setting (3% vs. 1%).

- USCG personnel who reported an average of 4 hours of sleep or less per night had the highest prevalence rate of being classified as having possible PTS compared to those who reported an average of 5 or more hours of sleep per night (i.e., 5-6 hours, 7-8 hours, and 9+ hours) (12% vs. 1%-3%).

- Service members who were classified as having high depression had a substantially higher prevalence rate of possible PTS than those who were classified as having low depression (23% vs. 1%).

- USCG personnel who were classified as having high anxiety had a considerably higher prevalence rate of possible PTS than those who were classified as having low anxiety (14% vs. 0%).

- USCG personnel who were classified as having high anger had a markedly higher prevalence rate of possible PTS than those who were classified as having low anger (22% vs. 1%).

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[8] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

5.5 Anxiety

Respondents were asked four items to assess how often they experienced symptoms of anxiety associated with stress in the past 30 days, including "feeling nervous, anxious, on edge, or worrying a lot about different things," "getting tired very easily," "trouble falling asleep or staying asleep," and "becoming easily annoyed or irritable." Responses were provided on a 4-point scale, ranging from "Not at all" to "More than half the days." To create an anxiety level scale, responses to the four items were recoded (i.e., "More than half the days" was assigned a value of 1, "Several days" was assigned a value of .667, "One or two days" was assigned a value of .333, and "Not at all" was assigned a value of 0) and averaged. Anxiety level was then dichotomized based on a cutoff value. Those participants with an average score of 0.75 or greater were classified as "High anxiety," whereas those with an average score of less than 0.75 were classified as "Low anxiety."

Approximately 12% of active duty USCG personnel were classified as having high anxiety (see Table 5.5). In comparison, the prevalence rate of high anxiety for the Armed Forces was 17% (16% for males and 23% for females).[9] Figure 5.E presents the relationship between high anxiety and platform, along with four variables strongly associated with high anxiety: average hours of nightly sleep, depression, anger, and PTS.

[9] Barlas, F. M., Higgins, W. B., Pflieger, J. C., & Diecker, K. (2013). *2011 Health Related Behaviors Survey of Active Duty Military Personnel.*

Figure 5.E: Indicators Associated with High Anxiety[10]

- USCG personnel who were stationed in an aviation setting had a lower prevalence rate of high anxiety compared to those stationed ashore or afloat (7% vs. 12%-14%).

- USCG members who reported an average of 4 hours of sleep or less per night had the highest prevalence rate of high anxiety compared to those who reported an average of 5 or more hours of sleep per night (i.e., 5-6 hours, 7-8 hours, and 9+ hours) (47% vs. 5%-17%).

- USCG personnel who were classified as having high depression had a considerably higher rate of high anxiety than those who were classified as having low depression (56% vs. 9%).

- USCG personnel who were classified as having high anger had a markedly higher prevalence rate of high anxiety compared to those who were classified as having low anger (56% vs. 10%).

- USCG personnel who were classified as having possible PTS had a substantially higher rate of high anxiety than personnel who were unlikely to be classified as having PTS (82% vs. 10%).

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[10] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

5.6 Anger

Respondents were asked four items about how much behaviors related to anger described them, including "I often find myself getting angry at people or situations," "When I get angry, I get really mad," and "When I get angry I stay angry." Responses for these three items were measured on a 5-point scale, ranging from "Not at all" to "A great deal." To create an anger propensity scale, the response values on these three items were recoded (i.e., "A great deal" was assigned a value of 1, "A lot" was assigned a value of .75, "Somewhat" was assigned a value of .5, "A little" was assigned a value of .25, and "Not at all" was assigned a value of 0). The fourth item asked respondents about internalization of anger on a 5-point scale, ranging from "Other people never know when I am angry" to "Other people always know when I am angry." Responses to this item were recoded in the same way as the other three items (i.e., "Other people always know when I am angry" was assigned a value of 1, "Other people often know when I am angry" was assigned a value of .75, "Other people sometimes know when I am angry" was assigned a value of .5, "Other people rarely know when I am angry" was assigned a value of .25, and "Other people never know when I am angry" was assigned a value of 0). The scores for all four items were then averaged, and anger propensity was dichotomized based on a cutoff value. Those with an average score of 0.75 or greater were classified as "High anger," whereas those with an average score of less than 0.75 were classified as "Low anger."

Just over 3% of active duty USCG personnel were classified as having high anger propensity (see Table 5.6). Figure 5.F presents the relationship between high anger propensity and platform, along with four variables strongly associated with high anger propensity: age group, depression, anxiety, and PTS.

Figure 5.F: Indicators Associated with High Anger[11]
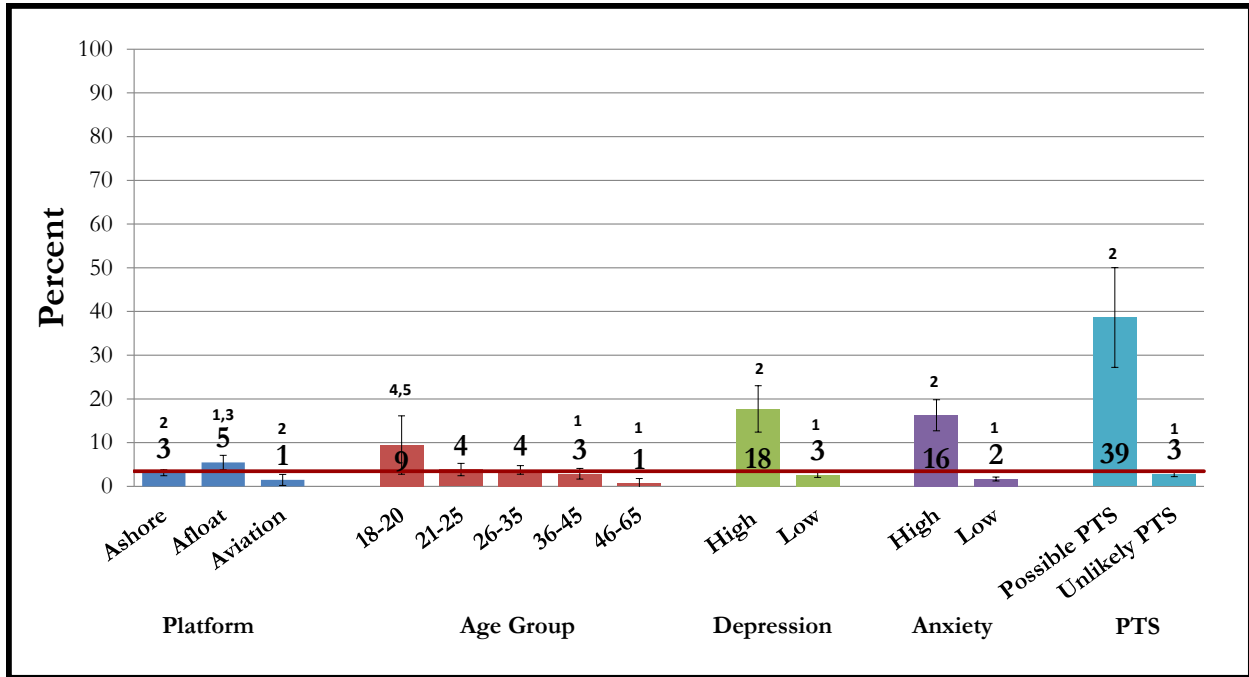
- USCG personnel who were stationed afloat had a higher prevalence rate of high anger propensity compared to those stationed ashore or in an aviation setting (5% vs. 1%-3%).

- USCG personnel who were 18 to 20 years old had a higher prevalence rate of high anger propensity compared to those 36 and older (i.e., 36-45, 46-65) (9% vs. 1%-3%).

- USCG personnel who were classified as having high depression had a higher prevalence rate of high anger propensity than those who were classified as having low depression (18% vs. 3%).

- Service members who were classified as having high anxiety had a higher prevalence rate of high anger propensity compared to personnel who were classified as having low anxiety (16% vs. 2%).

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[11] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.
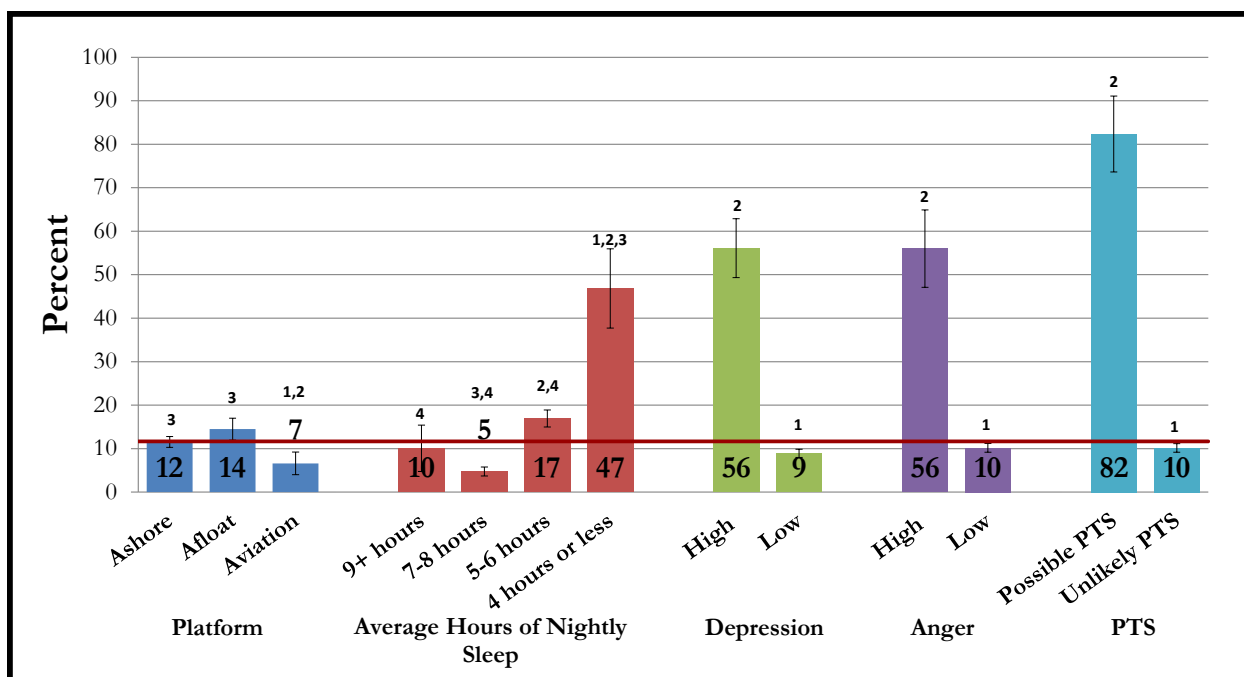
- USCG personnel who were classified as having possible PTS had a substantially higher prevalence rate of high anger than personnel who were unlikely to be classified as having PTS (39% vs. 3%).

5.7 Suicidal Ideation or Attempt

Respondents were asked about suicide ideation and suicidal attempts to determine whether either had occurred and, if so, the timing of the occurrence(s). If respondents answered "Yes" to lifetime suicide ideation, they were asked a follow-up question about when the ideation had occurred; the same questions were asked regarding suicide attempt(s). Timeframes included within the past year, since joining the military, and before joining the military. The following analysis focuses on those who indicated they had seriously considered suicide or had attempted suicide in the past year.

Approximately 2% of active duty USCG personnel reported suicidal ideation or attempt(s) in the past year (see Table 5.7). Figure 5.G presents the relationship between reported suicidal ideation or attempt in the past year and platform, along with four variables strongly associated with suicidal ideation or attempt in the past year: depression, anxiety, PTS, and lifetime self-inflicted injury.

Figure 5.G: Indicators Associated with Suicidal Ideation or Attempt[12]
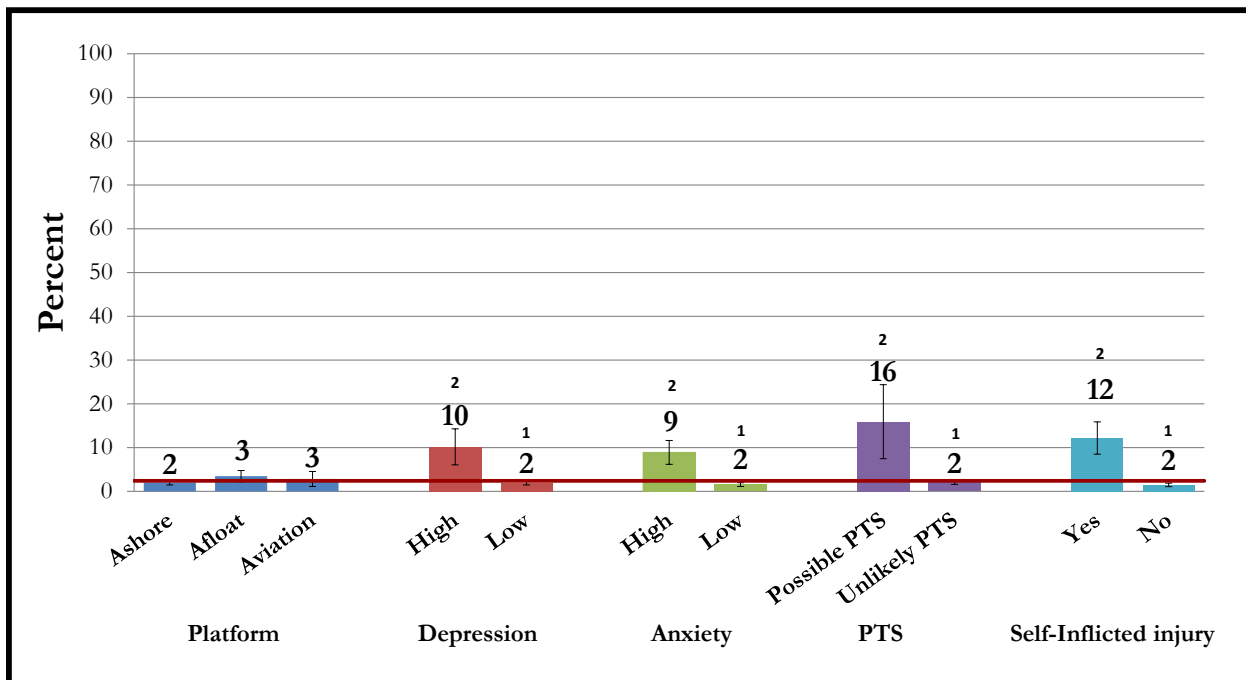
- There were no significant differences in reported suicidal ideation or attempt by platform.

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[12] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- USCG personnel who were classified as having high depression had a higher rate of reported suicidal ideation or attempt than those who were classified as having low depression (10% vs. 2%).

- USCG personnel who were classified as having high anxiety had a higher prevalence rate of reported suicidal ideation or attempt than those who were classified as having low anxiety (9% vs. 2%).

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of reported suicidal ideation or attempt than personnel who were unlikely to be classified as having PTS (16% vs. 2%).

- USCG personnel who reported lifetime self-inflicted injury had a higher prevalence rate of reported suicidal ideation or attempt than personnel who did not report lifetime self-inflicted injury (12% vs. 2%).

5.8 History of Physical Abuse

Respondents were asked about physical abuse history before joining the military and since joining the military, as well as the perpetrator of the violence (i.e., either a civilian or someone in the military). A history of physical abuse was based on endorsing at least one of three items: being physically abused, punished, or beaten to the point of receiving bruises, cuts, welts, lumps, or other injuries a) by someone in authority or having some power over you before joining the military, b) by someone in the military since joining the military, or c) by a civilian since joining the military.

Analyses showed that approximately 12% of active duty USCG personnel reported a history of physical abuse (see Table 5.8).

Figure 5.H presents the relationship between having a history of physical abuse and platform, along with four variables strongly associated with having a history of physical abuse: average hours of nightly sleep, history of sexual abuse, anger, and PTS.

Figure 5.H: Indicators Associated with History of Physical Abuse[13]
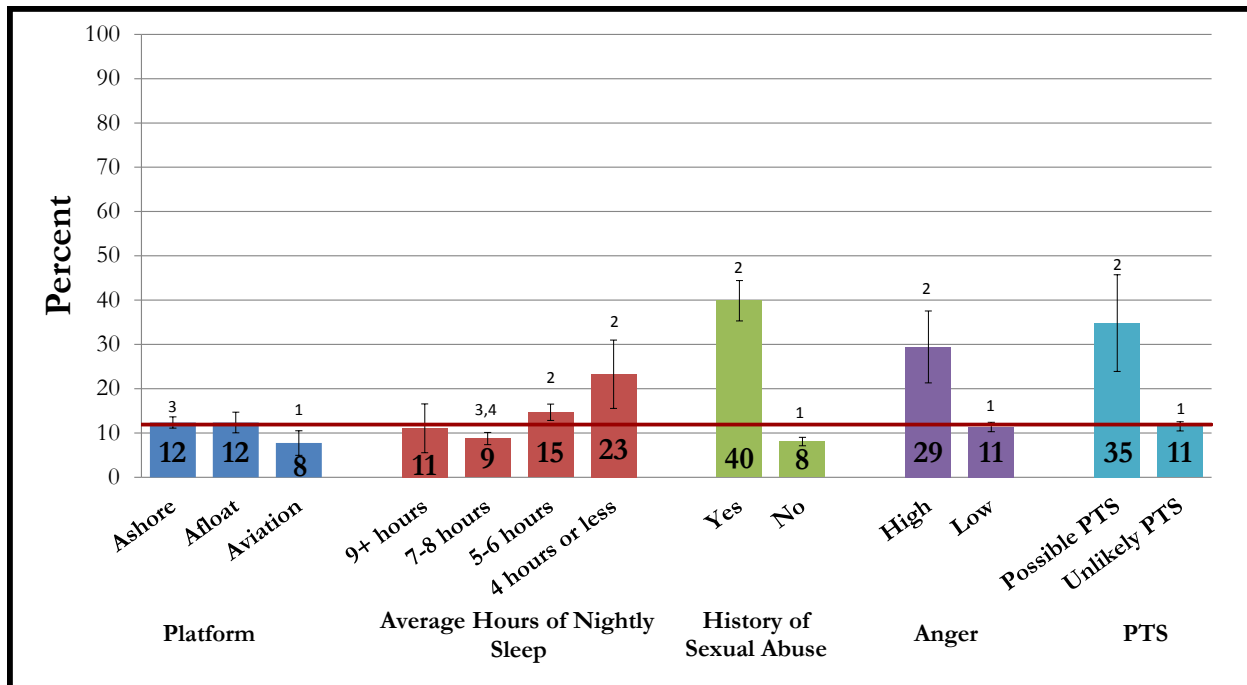
- USCG personnel who were stationed ashore had a higher prevalence rate of having a history of physical abuse than those stationed in an aviation setting (12% vs. 8%).

- USCG personnel who reported 6 or less hours of average nightly sleep (i.e., 4 hours or less, 5-6 hours) had higher rates of having a history of physical abuse compared to those who reported 7 to 8 average hours of nightly sleep (15%-23% vs. 9%).

- Service members who reported having a history of sexual abuse had a higher prevalence rate of having a history of physical abuse than those who did not report a history of sexual abuse (40% vs. 8%).

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[13] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- USCG personnel who were classified as having high anger propensity had a higher prevalence rate of having a history of physical abuse than those who were classified as having low anger propensity (29% vs. 11%).

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of having a history of physical abuse than those who were unlikely to be classified as having PTS (35% vs. 11%).

5.9 History of Sexual Abuse

Respondents were asked about sexual abuse history before joining the military and since joining the military, as well as the perpetrator of the violence (i.e., either a civilian or someone in the military). A history of sexual abuse was based on endorsing at least one of three items: any type of unwanted sexual contact a) before joining the military, b) by someone in the military since joining the military, or c) by a civilian since joining the military.

Approximately 12% of active duty USCG personnel reported having a history of sexual abuse (see Table 5.9). Figure 5.I presents the relationship between having a history of sexual abuse and platform, along with four variables strongly associated with having a history of sexual abuse: gender, history of physical abuse, PTS, and lifetime self-inflicted injury.

Figure 5.I: Indicators Associated with Sexual Abuse[14]

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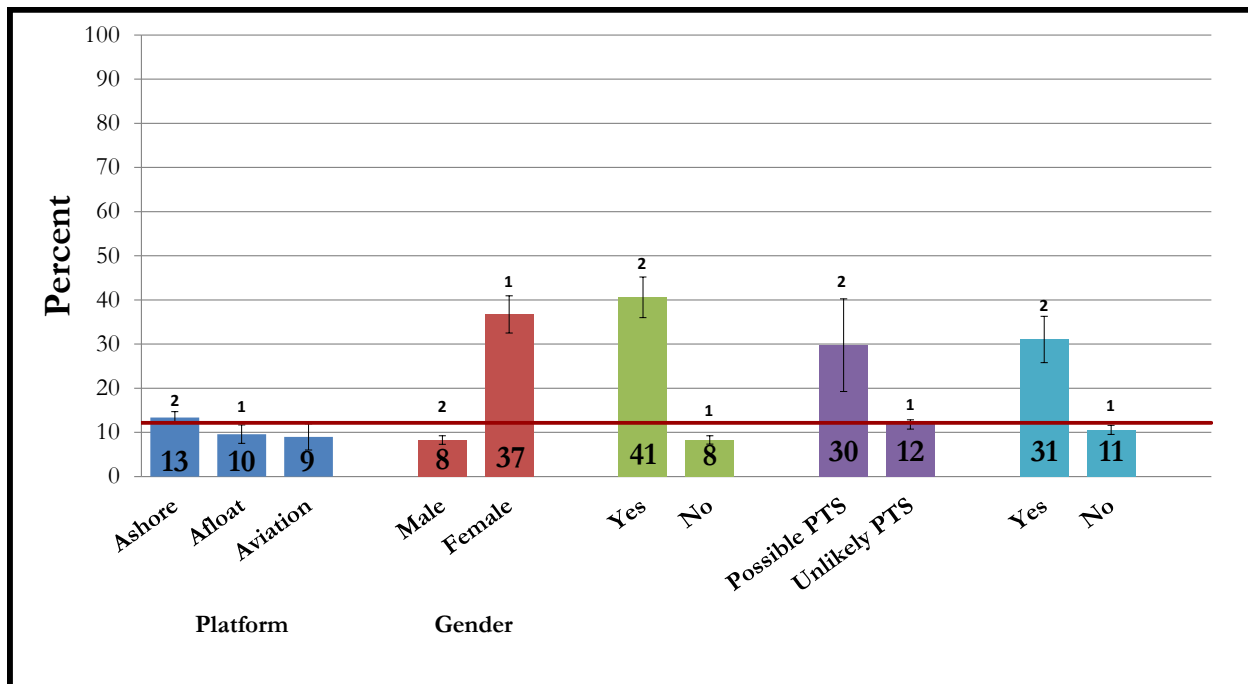
[14] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group.

- USCG personnel who were stationed ashore had a higher prevalence rate of having a history of sexual abuse than those stationed afloat (13% vs. 10%).

- Female USCG personnel had a higher prevalence rate of having a history of sexual abuse than male USCG personnel (37% vs. 8%).

- USCG personnel who reported having a history of physical abuse had a higher prevalence rate of having a history of sexual abuse than those who did not report a history of physical abuse (41% vs. 8%).

- USCG personnel who were classified as having possible PTS had a higher prevalence rate of having a history of sexual abuse than those who were unlikely to be classified as having PTS (30% vs. 12%).

- USCG personnel who reported a self-inflicted injury in their lifetime had a higher prevalence rate of having a history of sexual abuse than those who did not report a self-inflicted injury in their lifetime (31% vs. 11%).

5.10 Interpretations and Recommendations

CG-11 notes that platform was a significant covariate of six of the nine stress and psychological health outcomes, with personnel stationed afloat tending to have higher prevalence rates of negative outcomes than those stationed ashore or in an aviation setting, including high overall stress, possible PTS, high anxiety, and high anger. Personnel stationed ashore had a higher prevalence rate of having a history of physical abuse than those stationed in an aviation setting, and a higher prevalence rate of having a history of sexual abuse than those stationed afloat.

PTS, depression, and anxiety were most frequently among the strongest covariates of the nine stress and psychological health outcomes, highlighting the likelihood of co-occurring psychological health concerns. Specifically, PTS was one of the strongest covariates for seven of the outcome variables. USCG personnel who were classified as having possible PTS had a higher prevalence rate of high overall stress, high depression, high anxiety, high anger propensity, suicidal ideation or attempt, history of physical abuse, and a history of sexual abuse than those unlikely to be classified as having PTS. These findings stress the importance of identification and effective treatment of PTS.

Depression was also one of the strongest covariates of stress and psychological health outcomes, being among the strongest covariates for six out of the nine outcome variables. USCG personnel who were classified as having high depression had a lower prevalence rate of high resilience and a higher prevalence rate of high overall stress, possible PTS, high anxiety, high anger, and suicidal

ideation or attempt than those classified as having low depression. PTS, depression, and anxiety appear to be among a cluster of symptoms that are inter-related.

Anxiety was also one of the strongest covariates of stress and psychological health outcomes for six out of the nine outcome variables. Similar to depression, service members who were classified as having high anxiety had a lower prevalence rate of high resilience and a higher prevalence rate of high overall stress, high depression, possible PTS, high anger, and suicidal ideation or attempt.

Average hours of nightly sleep was among the strongest covariates for almost half of the stress and psychological health outcomes, including depression, PTS, anxiety, and physical abuse, with fewer reported average hours of sleep being associated with higher prevalence rates of negative psychological health outcomes. USCG personnel who reported an average of 4 hours or less of average nightly sleep had the highest prevalence rate of high depression, high anxiety, and being classified as having possible PTS; those who reported 6 or fewer average hours of nightly sleep had higher prevalence rates of having a history of physical abuse compared to those who reported 7 to 8 average hours of nightly sleep. These findings highlight the importance of educating personnel on healthy sleeping habits and providing resources for those who are sleeping too much or too little to identify the root cause(s), whether psychological or physical. Lack of sleep or over-sleeping may be a symptom of underlying psychological health concerns.

High resilience, a trait that may have a positive effect on performance in the USCG, was most strongly associated with risk-taking propensity, lower depression and anxiety rates, and reported use of positive coping strategies. Not surprisingly, measures of high depression and high anxiety were associated with lower levels of resilience.

USCG personnel who reported a history of sexual abuse had a higher prevalence rate of having a history of physical abuse than those who did not report a history of sexual abuse; those who reported a history of physical abuse also had a higher prevalence rate of having a history of sexual abuse than those who did not report a history of physical abuse. USCG personnel who reported 6 hours or less of average nightly sleep (i.e., 4 hours or less, 5-6 hours) had higher rates of having a history of physical abuse compared to those who reported 7 to 8 average hours of nightly sleep. Those classified as having high anger propensity had higher prevalence rates of having a history of physical abuse than those who were classified as having low anger propensity. USCG personnel who were classified as having possible PTS had a higher prevalence rate of having a history of physical abuse and a higher prevalence rate of having a history of sexual abuse than those who were unlikely to be classified as having PTS. In addition, those who reported a self-inflicted injury in their lifetime had a higher prevalence rate of having a history of sexual abuse than those who did not report a self-inflicted injury in their lifetime. These findings highlight the importance of treatment for those with a history of physical and/or sexual abuse.

Considering the prevalence rates of "high" depression (5.65%), "high" anxiety (11.66%), "high" PTS (2.03%), and other psychological health conditions in the Armed Forces, the USCG appears remarkably strong and resilient. Given that the afloat community had the highest prevalence rates of high overall stress and high anger and higher prevalence rates of possible PTS and high anxiety than the aviation community, CG-11 recommends that the afloat community consider the overall behavioral health of its crew members. Independent Duty Health Services Technicians (IDHS) should be aware of the symptom constellations of depression, anxiety, and PTS. Research shows that self-inflicted injury/self-mutilation is typically a "warning sign" that a co-occurring condition (e.g., anxiety, depression) may be present and screening should commence.[15,16] With the advent of heavy drinking and only half of USCG personnel getting the recommended average of 7 to 8 hours of nightly sleep,[17] CG-11 is concerned about the increased risk of psychological health concerns among these members. Further, those who are not getting the necessary restorative sleep for appropriate cognitive and physical functioning may be at increased risk for "accidents."[18] Behavioral and psychological health can be a barometer of mood, morale and readiness. The aforementioned recommendations, while focused on the afloat community, are also expectations regardless of platform: aviation, afloat or ashore.

Tables

The following tables present an in-depth analysis of stress and psychological health in the USCG.

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[15] Andover, M. S., Pepper, C. M., Ryabchenko, K. A., Orrico, E. G., & Gibb, B. E. (2005). Self-mutilation and symptoms of depression, anxiety, and borderline personality disorder. *Suicide and Life-Threatening Behavior*, *35*, 581–591.
[16] Washburn, J. J., Gebhardt, M., Styer, D. M., Juzwin, K. R., & Gottlieb, L. (2012). Co-occurring disorders in the treatment of nonsuicidal self-injury: An evidence-informed approach. *Journal of Cognitive Psychotherapy: An International Quarterly, 26*(4), 348-364.
[17] Barlas, F. M., Higgins, W. B., Pflieger, J. C., & Diecker, K. (2013). *2011 Health Related Behaviors Survey of Active Duty Military Personnel*.
[18] Centers for Disease Control and Prevention. (March 14, 2013). Insufficient sleep is a public health epidemic. Retrieved September 20, 2013, from http://www.cdc.gov/features/dssleep/

Table 5.1 – High Resilience – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Total	35.10	(0.80)			
Platform					
Ashore	34.51	(0.95)		0.92	(0.73, 1.14)
Afloat	35.83	(1.78)		0.98	(0.76, 1.26)
Aviation	37.77	(2.60)		1.00	
Gender					
Male	35.80	(0.86) [2]	1.24	(1.03, 1.48)	*
Female	30.62	(2.10) [1]	1.00		
Pay Grade					
E1-E4	32.55	(1.42)		0.69	(0.54, 0.88)	*
E5-E6	35.87	(1.32)		0.76	(0.61, 0.96)	*
E7-E9	32.58	(2.28)		0.69	(0.53, 0.91)	*
W01-W05	35.96	(4.20)		0.81	(0.56, 1.16)
O1-O3	38.68	(2.60)		0.91	(0.69, 1.20)
O4-O10	41.27	(3.23)		1.00	
Age Group					
18-20	29.89	(5.34)		0.87	(0.48, 1.56)
21-25	34.53	(1.79)		1.07	(0.75, 1.53)
26-35	35.12	(1.24)		1.10	(0.78, 1.54)
36-45	36.58	(1.80)		1.17	(0.82, 1.67)
46-65	33.01	(3.62)		1.00	
Race/Ethnicity					
White, non-Hispanic	34.77	(0.90)		1.00	
African American, non-Hispanic	37.73	(3.67)		1.14	(0.83, 1.56)
Hispanic	36.74	(2.39)		1.09	(0.88, 1.35)
Other	31.65	(3.76)		0.87	(0.61, 1.23)
Education					
High school or less	29.89	(1.66) [2,3]	0.69	(0.56, 0.84)	*
Some college	35.66	(1.10) [1]	0.89	(0.76, 1.05)
College graduate or higher	38.28	(1.62) [1]	1.00		

Table 5.1 – High Resilience – Prevalence Rates and Odds Ratios

Family Status						
Not married	34.43	(1.37)		0.95	(0.82, 1.10)	
Married, spouse not present	33.31	(2.90)		0.90	(0.69, 1.18)	
Married, spouse present	35.67	(1.05)		1.00		
Children Living With You						
Yes	35.30	(1.21)		1.00		
No	34.95	(1.07)		0.98	(0.86, 1.13)	
Combat Deployed in Past Year						
Yes	44.58	(4.23)	[2]	1.51	(1.07, 2.13)	*
No	34.71	(0.81)	[1]	1.00		
Average Hours of Nightly Sleep						
9+ hours	37.21	(4.36)		1.04	(0.72, 1.53)	
7-8 hours	36.20	(1.21)		1.00		
5-6 hours	33.67	(1.26)		0.89	(0.77, 1.04)	
4 hours or less	27.85	(4.22)		0.68	(0.45, 1.04)	
Overall Stress in Past 12 Months						
High	28.53	(1.25)	[2]	0.63	(0.54, 0.72)	*
Low	38.96	(1.03)	[1]	1.00		
History of Physical Abuse						
Yes	33.91	(2.30)		0.94	(0.76, 1.16)	
No	35.37	(0.86)		1.00		
History of Sexual Abuse						
Yes	32.31	(2.24)		0.87	(0.70, 1.07)	
No	35.52	(0.86)		1.00		
Risk-Taking						
High Risk Taking	69.53	(2.65)	[2]	4.88	(3.78, 6.30)	*
Low-Moderate Risk Taking	31.85	(0.82)	[1]	1.00		
Religiosity/Spirituality						
High	39.95	(1.64)	[3,4]	1.00		
Medium	34.93	(1.35)		0.81	(0.68, 0.96)	*
Low	32.33	(2.02)	[1]	0.72	(0.57, 0.90)	*
Not Applicable	32.30	(1.57)	[1]	0.72	(0.59, 0.87)	*

Table 5.1 – High Resilience – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30 Days

Yes	36.04	(0.85)	[2]	1.00		
No	30.20	(2.67)	[1]	0.77	(0.59, 0.99)	*

Heavy Alcohol Use, Past 12 Months

Yes	31.89	(2.88)		0.86	(0.65, 1.12)	
No	35.37	(0.83)		1.00		

Current Smoker

Yes	31.00	(1.78)	[2]	0.80	(0.67, 0.95)	*
No	36.06	(0.89)	[1]	1.00		

Depression

High	18.21	(2.74)	[2]	0.39	(0.27, 0.57)	*
Low	36.14	(0.83)	[1]	1.00		

Anxiety

High	21.03	(2.02)	[2]	0.45	(0.35, 0.58)	*
Low	36.94	(0.86)	[1]	1.00		

Anger

High	24.23	(3.93)	[2]	0.58	(0.38, 0.89)	*
Low	35.47	(0.82)	[1]	1.00		

Possible PTS

Possible PTS	25.32	(5.13)		0.62	(0.36, 1.05)	
Unlikely PTS	35.49	(0.82)		1.00		

Suicidal Ideation Since Joining Military

Yes	25.47	(4.22)	[2]	0.62	(0.40, 0.97)	*
No	35.39	(0.81)	[1]	1.00		

Self-Inflicted Injury, Lifetime History

Yes	21.78	(2.42)	[2]	0.49	(0.37, 0.65)	*
No	36.32	(0.84)	[1]	1.00		

Positive Coping

Yes	42.16	(1.04)	[2]	2.50	(2.14, 2.93)	*
No	22.56	(1.18)	[1]	1.00		

Avoidance Coping

Yes	32.34	(1.35)	[2]	0.83	(0.71, 0.96)	*
No	36.64	(1.00)	[1]	1.00		

Table 5.1 – High Resilience – Prevalence Rates and Odds Ratios

Social Network Facilitation - Alcohol

Yes	35.21	(0.83)	1.09	(0.83, 1.44)
No	33.21	(3.05)	1.00	

Social Network Facilitation - Cigarettes

Yes	34.11	(0.94)	0.86	(0.74, 1.00)
No	37.56	(1.53)	1.00	

Social Network Facilitation - Smokeless

Yes	35.84	(1.02)	1.09	(0.94, 1.26)
No	33.91	(1.30)	1.00	

Social Network Facilitation - RxDrugs

Yes	31.02	(3.68)	0.82	(0.59, 1.16)
No	35.28	(0.82)	1.00	

Leadership Deterrence - Alcohol

Yes	36.21	(1.14)	1.10	(0.96, 1.26)
No	34.09	(1.14)	1.00	

Leadership Deterrence - Cigarettes

Yes	35.78	(1.05)	1.07	(0.93, 1.23)
No	34.22	(1.23)	1.00	

Leadership Deterrence - Smokeless

Yes	35.74	(1.08)	1.06	(0.92, 1.22)
No	34.38	(1.20)	1.00	

Leadership Deterrence - RxDrugs

Yes	35.55	(0.84)	[2]	1.31	(1.01, 1.70)	*
No	29.66	(2.69)	[1]	1.00	

Age of onset for alcohol use

14 years old or younger	36.88	(2.04)	1.34	(0.94, 1.92)	
15 to 17 years old	32.74	(1.26)	1.12	(0.80, 1.56)	
18 to 20 years old	36.20	(1.59)	1.30	(0.92, 1.83)	
21 years old or older	38.90	(2.15)	1.46	(1.02, 2.10)	*
I have never consumed alcohol	30.37	(3.41)	1.00		

Table 5.1 – High Resilience – Prevalence Rates and Odds Ratios				
Age of onset for tobacco use				
14 years old or younger	36.77	(3.28)	1.01	(0.76, 1.35)
15 to 17 years old	32.79	(2.01)	0.85	(0.70, 1.04)
18 to 20 years old	31.97	(2.10)	0.82	(0.66, 1.01)
21 years old or older	32.32	(3.41)	0.83	(0.61, 1.14)
I have never smoked cigarettes	36.48	(1.05)	1.00	

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having high resilience. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high resilience; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Resilience Level, Q139A, Q139B, Q139J, Q168A, Q168C, Q168I).

Table 5.2 – High Overall Stress – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	36.78	(0.79)			
Platform					
Ashore	34.62	(0.93)	[2]	0.96	(0.77, 1.19)
Afloat	45.41	(1.78)	[1,3]	1.76	(1.37, 2.25) *
Aviation	33.71	(2.48)	[2]	1.00	
Gender					
Male	35.31	(0.84)	[2]	0.60	(0.51, 0.71) *
Female	46.00	(2.19)	[1]	1.00	
Pay Grade					
E1-E4	33.29	(1.38)	[5]	0.54	(0.43, 0.69) *
E5-E6	37.10	(1.29)		0.71	(0.57, 0.89) *
E7-E9	38.87	(2.33)		0.80	(0.62, 1.03)
W01-W05	31.69	(3.95)		0.63	(0.44, 0.90) *
O1-O3	42.41	(2.59)	[1]	0.91	(0.69, 1.20)
O4-O10	42.39	(3.18)		1.00	
Age Group					
18-20	44.17	(5.64)		1.87	(1.08, 3.24) *
21-25	35.07	(1.74)		1.27	(0.89, 1.82)
26-35	37.80	(1.22)		1.43	(1.02, 2.01) *
36-45	39.15	(1.79)		1.52	(1.07, 2.16) *
46-65	29.76	(3.45)		1.00	
Race/Ethnicity					
White, non-Hispanic	37.49	(0.89)		1.00	
African American, non-Hispanic	33.99	(3.48)		0.86	(0.63, 1.17)
Hispanic	31.19	(2.22)		0.76	(0.61, 0.94) *
Other	40.80	(3.83)		1.15	(0.84, 1.58)
Education					
High school or less	33.41	(1.66)		0.84	(0.69, 1.03)
Some college	37.89	(1.08)		1.03	(0.88, 1.21)
College graduate or higher	37.26	(1.58)		1.00	

Table 5.2 – High Overall Stress – Prevalence Rates and Odds Ratios

Family Status

Not married	33.69	(1.32)	[2]	0.84	(0.73, 0.97)	*
Married, spouse not present	43.51	(2.96)	[1]	1.27	(0.99, 1.63)	
Married, spouse present	37.73	(1.03)		1.00		

Children Living With You

Yes	37.46	(1.20)		1.00		
No	36.25	(1.04)		0.95	(0.83, 1.09)	

Combat Deployed in Past Year

Yes	45.27	(4.21)	[2]	1.46	(1.04, 2.05)	*
No	36.17	(0.81)	[1]	1.00		

Average Hours of Nightly Sleep

9+ hours	21.19	(3.65)	[3,4]	0.76	(0.49, 1.19)	
7-8 hours	26.06	(1.10)	[3,4]	1.00		
5-6 hours	46.95	(1.32)	[1,2]	2.51	(2.16, 2.92)	*
4 hours or less	59.42	(4.57)	[1,2]	4.16	(2.82, 6.12)	*

History of Physical Abuse

Yes	52.58	(2.38)	[2]	2.09	(1.71, 2.55)	*
No	34.66	(0.84)	[1]	1.00		

History of Sexual Abuse

Yes	56.66	(2.34)	[2]	2.52	(2.06, 3.08)	*
No	34.17	(0.83)	[1]	1.00		

Risk-Taking

High Risk Taking	43.61	(2.83)	[2]	1.39	(1.09, 1.76)	*
Low-Moderate Risk Taking	35.80	(0.84)	[1]	1.00		

Religiosity/Spirituality

High	40.24	(1.59)		1.00		
Medium	35.24	(1.32)		0.81	(0.68, 0.96)	*
Low	36.69	(2.04)		0.86	(0.69, 1.07)	
Not Applicable	35.56	(1.56)		0.82	(0.68, 0.99)	*

Vigorous Physical Exercise, Past 30

Yes	35.82	(0.83)	[2]	1.00		
No	45.70	(2.82)	[1]	1.51	(1.19, 1.90)	*

Table 5.2 – High Overall Stress – Prevalence Rates and Odds Ratios

Heavy Alcohol Use, Past 12 Months

Yes	52.20	(2.98)	2	1.98	(1.55, 2.53)	*
No	35.50	(0.81)	1	1.00		

Current Smoker

Yes	41.77	(1.82)	2	1.30	(1.10, 1.53)	*
No	35.59	(0.87)	1	1.00		

Depression

High	74.85	(3.01)	2	5.65	(4.10, 7.78)	*
Low	34.52	(0.81)	1	1.00		

Anxiety

High	80.55	(1.91)	2	9.20	(7.16, 11.82)	*
Low	31.04	(0.81)	1	1.00		

Anger

High	77.10	(3.81)	2	6.17	(4.03, 9.46)	*
Low	35.30	(0.82)	1	1.00		

Resilience

Low resilience	38.90	(4.13)		1.49	(1.04, 2.14)	*
Moderate resilience	40.66	(1.06)	3	1.61	(1.38, 1.86)	*
High resilience	29.90	(1.30)	2	1.00		

Possible PTS

Possible PTS	84.80	(4.20)	2	10.02	(5.29, 18.95)	*
Unlikely PTS	35.78	(0.80)	1	1.00		

Suicidal Ideation Since Joining Military

Yes	55.19	(4.73)	2	2.18	(1.49, 3.19)	*
No	36.06	(0.81)	1	1.00		

Self-Inflicted Injury, Lifetime History

Yes	55.48	(2.87)	2	2.32	(1.83, 2.94)	*
No	34.99	(0.82)	1	1.00		

Positive Coping

Yes	35.30	(0.98)	2	0.83	(0.72, 0.95)	*
No	39.66	(1.35)	1	1.00		

Table 5.2 – High Overall Stress – Prevalence Rates and Odds Ratios

Avoidance Coping						
Yes	47.49	(1.40)	[2]	1.98	(1.72, 2.27)	*
No	31.38	(0.94)	[1]	1.00		
Social Network Facilitation - Alcohol						
Yes	37.46	(0.82)	[2]	1.47	(1.12, 1.94)	*
No	28.92	(2.81)	[1]	1.00		
Social Network Facilitation - Cigarettes						
Yes	38.09	(0.93)	[2]	1.22	(1.05, 1.42)	*
No	33.53	(1.46)	[1]	1.00		
Social Network Facilitation - Smokeless						
Yes	38.00	(1.00)	[2]	1.15	(1.00, 1.32)	*
No	34.74	(1.27)	[1]	1.00		
Social Network Facilitation - RxDrugs						
Yes	47.14	(3.85)	[2]	1.57	(1.15, 2.14)	*
No	36.28	(0.80)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	34.49	(1.10)	[2]	0.82	(0.72, 0.94)	*
No	39.15	(1.13)	[1]	1.00		
Leadership Deterrence - Cigarettes						
Yes	34.97	(1.02)	[2]	0.83	(0.73, 0.95)	*
No	39.33	(1.23)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	34.28	(1.04)	[2]	0.79	(0.69, 0.90)	*
No	39.82	(1.20)	[1]	1.00		
Leadership Deterrence - RxDrugs						
Yes	36.65	(0.82)		0.88	(0.70, 1.12)	
No	39.58	(2.78)		1.00		
Age of onset for alcohol use						
14 years old or younger	45.20	(2.03)	[3,4,5]	2.04	(1.44, 2.89)	*
15 to 17 years old	38.93	(1.28)	[4]	1.58	(1.14, 2.19)	*
18 to 20 years old	33.93	(1.52)	[1]	1.27	(0.91, 1.78)	
21 years old or older	30.44	(1.96)	[1,2]	1.08	(0.76, 1.55)	
I have never consumed alcohol	28.79	(3.25)	[1]	1.00		

Table 5.2 – High Overall Stress – Prevalence Rates and Odds Ratios

Age of onset for tobacco use						
14 years old or younger	46.67	(3.24)	5	1.71	(1.30, 2.23)	*
15 to 17 years old	43.11	(2.05)	5	1.48	(1.23, 1.78)	*
18 to 20 years old	36.49	(2.12)		1.12	(0.92, 1.37)	
21 years old or older	38.91	(3.47)		1.24	(0.92, 1.67)	
I have never smoked cigarettes	33.89	(1.00)	1,2	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having a high level of overall stress. The standard error and 95% confidence interval for each estimate is presented in parentheses.

aSignificance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

1Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
2Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
3Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
4Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

bOdds ratios are from logistic regression analyses predicting high overall stress; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Overall Stress Level, Past 12 Months, Q119, 120).

Table 5.3 – High Depression – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Total	5.65	(0.38)			
Platform					
Ashore	5.25	(0.44)	1.04	(0.64, 1.68)	
Afloat	7.42	(0.95)	1.42	(0.84, 2.38)	
Aviation	4.80	(1.14)	1.00		
Gender					
Male	5.38	(0.40)	0.64	(0.46, 0.87)	*
Female	7.37	(1.17)	1.00		
Pay Grade					
E1-E4	6.98	(0.76)	3.11	(1.54, 6.26)	*
E5-E6	6.34	(0.66)	2.87	(1.44, 5.74)	*
E7-E9	3.30	(0.86)	1.78	(0.81, 3.90)	
W01-W05	6.34	(2.10)	3.11	(1.30, 7.41)	*
O1-O3	3.80	(1.01)	1.87	(0.84, 4.16)	
O4-O10	2.04	(0.92)	1.00		
Age Group					
18-20	14.20	(4.06) [2,3,4,5]	8.42	(2.38, 29.83)	*
21-25	5.29	(0.83) [1]	2.84	(0.92, 8.82)	
26-35	5.79	(0.59) [1]	3.13	(1.03, 9.45)	*
36-45	5.63	(0.85) [1]	3.04	(0.98, 9.40)	
46-65	1.93	(1.05) [1]	1.00		
Race/Ethnicity					
White, non-Hispanic	5.43	(0.42)	1.00		
African American, non-Hispanic	9.08	(2.14)	1.74	(1.02, 2.96)	*
Hispanic	5.01	(1.06)	0.92	(0.58, 1.46)	
Other	7.06	(2.01)	1.32	(0.71, 2.46)	
Education					
High school or less	5.77	(0.83)	1.59	(1.01, 2.50)	*
Some college	6.50	(0.55) [3]	1.80	(1.22, 2.65)	*
College graduate or higher	3.72	(0.63) [2]	1.00		

Table 5.3 – High Depression – Prevalence Rates and Odds Ratios

Family Status						
Not married	6.95	(0.72)	[3]	1.67	(1.23, 2.25)	*
Married, spouse not present	10.53	(1.87)	[3]	2.63	(1.69, 4.09)	*
Married, spouse present	4.28	(0.44)	[1,2]	1.00		
Children Living With You						
Yes	5.41	(0.56)		1.00		
No	5.84	(0.51)		1.08	(0.82, 1.44)	
Combat Deployed in Past Year						
Yes	6.72	(2.12)		1.22	(0.62, 2.39)	
No	5.59	(0.39)		1.00		
Average Hours of Nightly Sleep						
9+ hours	4.72	(1.90)	[4]	1.98	(0.82, 4.78)	
7-8 hours	2.44	(0.39)	[3,4]	1.00		
5-6 hours	8.48	(0.74)	[2,4]	3.69	(2.55, 5.34)	*
4 hours or less	23.10	(3.93)	[1,2,3]	11.99	(7.01, 20.51)	*
Overall Stress in Past 12 Months						
High	11.51	(0.87)	[2]	5.65	(4.10, 7.78)	*
Low	2.25	(0.31)	[1]	1.00		
History of Physical Abuse						
Yes	11.19	(1.51)	[2]	2.44	(1.74, 3.42)	*
No	4.91	(0.38)	[1]	1.00		
History of Sexual Abuse						
Yes	9.48	(1.39)	[2]	1.94	(1.36, 2.77)	*
No	5.12	(0.39)	[1]	1.00		
Risk-Taking						
High Risk Taking	7.83	(1.54)		1.48	(0.95, 2.31)	
Low-Moderate Risk Taking	5.43	(0.40)		1.00		
Religiosity/Spirituality						
High	6.36	(0.81)		1.00		
Medium	5.09	(0.61)		0.79	(0.55, 1.14)	
Low	5.79	(0.99)		0.91	(0.58, 1.41)	
Not Applicable	5.71	(0.76)		0.89	(0.61, 1.31)	

Table 5.3 – High Depression – Prevalence Rates and Odds Ratios						
Vigorous Physical Exercise, Past 30 Days						
Yes	5.06	(0.38)	[2]	1.00		
No	11.32	(1.81)	[1]	2.40	(1.63, 3.52)	*
Heavy Alcohol Use, Past 12 Months						
Yes	12.36	(1.98)	[2]	2.62	(1.77, 3.86)	*
No	5.11	(0.38)	[1]	1.00		
Current Smoker						
Yes	9.49	(1.10)	[2]	2.11	(1.56, 2.85)	*
No	4.73	(0.39)	[1]	1.00		
Anxiety						
High	27.50	(2.18)	[2]	13.09	(9.71, 17.64)	*
Low	2.82	(0.29)	[1]	1.00		
Anger						
High	29.00	(4.13)	[2]	8.06	(5.29, 12.29)	*
Low	4.82	(0.37)	[1]	1.00		
Resilience						
Low resilience	13.30	(2.87)	[2,3]	5.09	(2.83, 9.16)	*
Moderate resilience	6.71	(0.54)	[1,3]	2.39	(1.65, 3.46)	*
High resilience	2.93	(0.48)	[1,2]	1.00		
Possible PTS						
Possible PTS	64.83	(5.60)	[2]	40.17	(24.26, 66.52)	*
Unlikely PTS	4.39	(0.34)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	12.97	(3.22)	[2]	2.57	(1.45, 4.57)	*
No	5.47	(0.38)	[1]	1.00		
Self-Inflicted Injury, Lifetime History						
Yes	16.63	(2.16)	[2]	4.02	(2.85, 5.67)	*
No	4.73	(0.37)	[1]	1.00		
Positive Coping						
Yes	4.39	(0.42)	[2]	0.52	(0.40, 0.69)	*
No	8.05	(0.76)	[1]	1.00		

Table 5.3 – High Depression – Prevalence Rates and Odds Ratios

Avoidance Coping

Yes	9.55	(0.83)	[2]	2.77	(2.09, 3.68)	*
No	3.67	(0.38)	[1]	1.00		

Social Network Facilitation - Alcohol

Yes	5.56	(0.39)		0.81	(0.49, 1.36)	
No	6.74	(1.58)		1.00		

Social Network Facilitation - Cigarettes

Yes	6.22	(0.47)	[2]	1.51	(1.07, 2.12)	*
No	4.22	(0.62)	[1]	1.00		

Social Network Facilitation - Smokeless

Yes	5.96	(0.49)		1.17	(0.87, 1.57)	
No	5.13	(0.60)		1.00		

Social Network Facilitation - RxDrugs

Yes	11.59	(2.51)	[2]	2.30	(1.39, 3.80)	*
No	5.39	(0.38)	[1]	1.00		

Leadership Deterrence - Alcohol

Yes	4.44	(0.48)	[2]	0.62	(0.47, 0.82)	*
No	6.98	(0.60)	[1]	1.00		

Leadership Deterrence - Cigarettes

Yes	4.46	(0.45)	[2]	0.59	(0.44, 0.78)	*
No	7.37	(0.67)	[1]	1.00		

Leadership Deterrence - Smokeless

Yes	4.38	(0.45)	[2]	0.58	(0.44, 0.77)	*
No	7.32	(0.65)	[1]	1.00		

Leadership Deterrence - RxDrugs

Yes	5.46	(0.39)	[2]	0.65	(0.42, 1.00)	
No	8.21	(1.59)	[1]	1.00		

Age of onset for alcohol use

14 years old or younger	9.08	(1.19)	[2,3,4]	0.93	(0.53, 1.64)	
15 to 17 years old	5.09	(0.58)	[1]	0.50	(0.29, 0.86)	*
18 to 20 years old	4.80	(0.70)	[1]	0.47	(0.27, 0.83)	*
21 years old or older	3.65	(0.81)	[1,5]	0.35	(0.18, 0.69)	*
I have never consumed alcohol	9.66	(2.16)	[4]	1.00		

Table 5.3 – High Depression – Prevalence Rates and Odds Ratios

Age of onset for tobacco use

14 years old or younger	7.70	(1.77)	1.64	(0.97, 2.77)	
15 to 17 years old	6.97	(1.06)	1.47	(1.01, 2.14)	*
18 to 20 years old	5.88	(1.04)	1.23	(0.81, 1.86)	
21 years old or older	7.69	(1.91)	1.63	(0.93, 2.86)	
I have never smoked cigarettes	4.85	(0.46)	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having a high level of depression. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high depression; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Depression Level, Past Week, Q125C, Q125E).

Table 5.4 – Possible PTS – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b] (95% CI)		
Total	2.03	(0.23)			
Platform					
Ashore	1.86	(0.27)	2.39	(0.74, 7.68)	
Afloat	3.28	(0.65) [3]	4.13	(1.25, 13.69)	*
Aviation	0.57	(0.40) [2]	1.00		
Gender					
Male	1.85	(0.24)	0.52	(0.32, 0.85)	*
Female	3.14	(0.78)	1.00		
Pay Grade					
E1-E4	2.61	(0.48)	4.58	(1.08, 19.32)	*
E5-E6	2.08	(0.39)	4.33	(1.04, 18.13)	*
E7-E9	1.87	(0.65)	3.29	(0.72, 15.14)	
W01-W05	2.06	(1.23)	4.05	(0.73, 22.34)	
O1-O3	1.05	(0.54)	2.40	(0.48, 11.99)	
O4-O10	0.65	(0.52)	1.00		
Age Group					
18-20	8.97	(3.31) [2,3,4]	5.68	(1.40, 23.07)	*
21-25	2.48	(0.58) [1]	1.47	(0.42, 5.12)	
26-35	1.85	(0.34) [1]	1.09	(0.32, 3.67)	
36-45	1.70	(0.48) [1]	1.00	(0.28, 3.61)	
46-65	1.71	(0.99)	1.00		
Race/Ethnicity					
White, non-Hispanic	1.85	(0.25)	1.00		
African American, non-Hispanic	4.45	(1.53)	2.48	(1.16, 5.26)	*
Hispanic	2.52	(0.76)	1.38	(0.71, 2.67)	
Other	1.42	(0.93)	0.76	(0.20, 2.90)	
Education					
High school or less	2.52	(0.56) [3]	2.57	(1.16, 5.70)	*
Some college	2.31	(0.34)	2.35	(1.14, 4.82)	*
College graduate or higher	1.00	(0.33) [1]	1.00		

Table 5.4 – Possible PTS – Prevalence Rates and Odds Ratios

Family Status						
Not married	2.67	(0.46)	3	1.81	(1.11, 2.96)	*
Married, spouse not present	3.38	(1.09)		2.32	(1.10, 4.86)	*
Married, spouse present	1.49	(0.26)	1	1.00		
Children Living With You						
Yes	1.63	(0.32)		1.00		
No	2.34	(0.33)		1.44	(0.89, 2.33)	
Combat Deployed in Past Year						
Yes	3.82	(1.63)		1.99	(0.81, 4.90)	
No	1.96	(0.24)		1.00		
Average Hours of Nightly Sleep						
9+ hours	1.40	(1.05)	4	1.93	(0.39, 9.53)	
7-8 hours	0.73	(0.21)	3,4	1.00		
5-6 hours	2.76	(0.43)	2,4	3.86	(1.99, 7.46)	*
4 hours or less	12.44	(3.10)	1,2,3	19.28	(8.65, 42.99)	*
Overall Stress in Past 12 Months						
High	4.68	(0.58)	2	10.02	(5.29, 18.95)	*
Low	0.49	(0.15)	1	1.00		
History of Physical Abuse						
Yes	5.93	(1.13)	2	4.11	(2.52, 6.70)	*
No	1.51	(0.22)	1	1.00		
History of Sexual Abuse						
Yes	4.96	(1.03)	2	3.17	(1.90, 5.28)	*
No	1.62	(0.22)	1	1.00		
Risk-Taking						
High Risk Taking	7.06	(1.46)	2	4.78	(2.85, 8.02)	*
Low-Moderate Risk Taking	1.56	(0.22)	1	1.00		
Religiosity/Spirituality						
High	2.28	(0.49)		1.00		
Medium	1.64	(0.35)		0.72	(0.39, 1.32)	
Low	2.66	(0.69)		1.17	(0.59, 2.31)	
Not Applicable	1.97	(0.46)		0.86	(0.46, 1.64)	

Table 5.4 – Possible PTS – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30 Days

Yes	1.83	(0.24)	[2]	1.00		
No	4.15	(1.15)	[1]	2.32	(1.25, 4.31)	*

Heavy Alcohol Use, Past 12 Months

Yes	5.53	(1.38)	[2]	3.29	(1.85, 5.87)	*
No	1.75	(0.23)	[1]	1.00		

Current Smoker

Yes	3.09	(0.65)	[2]	1.76	(1.06, 2.93)	*
No	1.78	(0.24)	[1]	1.00		

Depression

High	23.47	(2.98)	[2]	40.17	(24.26, 66.52)	*
Low	0.76	(0.15)	[1]	1.00		

Anxiety

High	14.47	(1.71)	[2]	41.29	(22.50, 75.77)	*
Low	0.41	(0.11)	[1]	1.00		

Anger

High	22.44	(3.79)	[2]	22.28	(13.25, 37.48)	*
Low	1.28	(0.19)	[1]	1.00		

Resilience

Low resilience	5.24	(1.90)	[3]	3.67	(1.53, 8.83)	*
Moderate resilience	2.20	(0.32)		1.49	(0.87, 2.57)	
High resilience	1.48	(0.34)	[1]	1.00		

Suicidal Ideation Since Joining Military

Yes	5.81	(2.23)	[2]	3.20	(1.39, 7.35)	*
No	1.89	(0.23)	[1]	1.00		

Self-Inflicted Injury, Lifetime History

Yes	7.35	(1.51)	[2]	5.11	(3.05, 8.56)	*
No	1.53	(0.21)	[1]	1.00		

Positive Coping

Yes	1.41	(0.24)	[2]	0.43	(0.27, 0.69)	*
No	3.21	(0.49)	[1]	1.00		

Table 5.4 – Possible PTS – Prevalence Rates and Odds Ratios						
Avoidance Coping						
Yes	3.94	(0.55)	[2]	4.01	(2.45, 6.56)	*
No	1.01	(0.21)	[1]	1.00		
Social Network Facilitation - Alcohol						
Yes	1.95	(0.24)		0.61	(0.29, 1.28)	
No	3.18	(1.11)		1.00		
Social Network Facilitation - Cigarettes						
Yes	2.23	(0.29)		1.48	(0.84, 2.61)	
No	1.51	(0.38)		1.00		
Social Network Facilitation - Smokeless						
Yes	2.22	(0.31)		1.40	(0.85, 2.33)	
No	1.59	(0.34)		1.00		
Social Network Facilitation - RxDrugs						
Yes	7.01	(2.01)	[2]	4.11	(2.14, 7.88)	*
No	1.80	(0.23)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	1.65	(0.30)		0.67	(0.42, 1.06)	
No	2.46	(0.37)		1.00		
Leadership Deterrence - Cigarettes						
Yes	1.43	(0.26)	[2]	0.49	(0.31, 0.78)	*
No	2.87	(0.43)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	1.49	(0.27)	[2]	0.54	(0.34, 0.86)	*
No	2.72	(0.41)	[1]	1.00		
Leadership Deterrence - RxDrugs						
Yes	1.93	(0.24)		0.58	(0.29, 1.16)	
No	3.26	(1.03)		1.00		
Age of onset for alcohol use						
14 years old or younger	4.21	(0.83)	[2,3]	0.92	(0.42, 2.04)	
15 to 17 years old	1.45	(0.32)	[1,5]	0.31	(0.14, 0.70)	*
18 to 20 years old	1.34	(0.38)	[1,5]	0.28	(0.12, 0.69)	*
21 years old or older	1.52	(0.53)		0.32	(0.12, 0.85)	*
I have never consumed alcohol	4.56	(1.52)	[2,3]	1.00		

Table 5.4 – Possible PTS – Prevalence Rates and Odds Ratios

Age of onset for tobacco use					
14 years old or younger	4.45	(1.37)	5	2.80	(1.38, 5.72)	*
15 to 17 years old	2.54	(0.66)		1.57	(0.85, 2.92)	
18 to 20 years old	2.07	(0.63)		1.27	(0.63, 2.56)	
21 years old or older	2.03	(1.01)		1.25	(0.44, 3.57)	
I have never smoked cigarettes	1.63	(0.27)	1	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having possible posttraumatic stress (PTS). The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting possible PTS; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Posttraumatic Stress (PTS) Level, Past 30 Days, Q128B, Q128D, Q128E, Q128F).

Table 5.5 – High Anxiety – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	11.66	(0.53)			
Platform					
Ashore	11.53	(0.63)	[3]	1.66	(1.11, 2.50)	*
Afloat	14.48	(1.28)	[3]	2.27	(1.47, 3.51)	*
Aviation	6.61	(1.32)	[1,2]	1.00		
Gender					
Male	10.71	(0.55)	[2]	0.56	(0.45, 0.70)	*
Female	17.64	(1.70)	[1]	1.00		
Pay Grade					
E1-E4	13.37	(1.01)		1.45	(0.98, 2.14)	
E5-E6	11.93	(0.87)		1.38	(0.94, 2.02)	
E7-E9	8.73	(1.36)		1.00	(0.63, 1.57)	
W01-W05	12.32	(2.84)		1.59	(0.92, 2.73)	
O1-O3	11.02	(1.66)		1.19	(0.75, 1.89)	
O4-O10	7.87	(1.75)		1.00		
Age Group					
18-20	19.45	(4.56)		2.63	(1.21, 5.74)	*
21-25	14.20	(1.29)		1.80	(1.01, 3.21)	*
26-35	11.25	(0.81)		1.38	(0.79, 2.42)	
36-45	10.30	(1.13)		1.25	(0.70, 2.25)	
46-65	8.40	(2.11)		1.00		
Race/Ethnicity					
White, non-Hispanic	12.25	(0.61)		1.00		
African American, non-Hispanic	10.46	(2.29)		0.84	(0.51, 1.37)	
Hispanic	8.08	(1.32)		0.63	(0.44, 0.91)	*
Other	11.36	(2.50)		0.92	(0.56, 1.51)	
Education					
High school or less	9.76	(1.06)	[2]	0.98	(0.71, 1.34)	
Some college	13.20	(0.76)	[1,3]	1.37	(1.07, 1.77)	*
College graduate or higher	9.97	(0.99)	[2]	1.00		

Table 5.5 – High Anxiety – Prevalence Rates and Odds Ratios

Family Status

Not married	12.94	(0.95)		1.25	(1.01, 1.55)	*
Married, spouse not present	13.89	(2.09)		1.35	(0.94, 1.96)	
Married, spouse present	10.65	(0.67)		1.00		

Children Living With You

Yes	10.81	(0.78)		1.00		
No	12.33	(0.72)		1.16	(0.95, 1.42)	

Combat Deployed in Past Year

Yes	19.72	(3.37)	[2]	1.94	(1.26, 2.97)	*
No	11.25	(0.54)	[1]	1.00		

Average Hours of Nightly Sleep

9+ hours	10.07	(2.72)	[4]	2.25	(1.20, 4.23)	*
7-8 hours	4.74	(0.53)	[3,4]	1.00		
5-6 hours	16.94	(0.99)	[2,4]	4.10	(3.13, 5.37)	*
4 hours or less	46.85	(4.65)	[1,2,3]	17.73	(11.51, 27.30)	*

Overall Stress in Past 12 Months

High	25.55	(1.19)	[2]	9.20	(7.16, 11.82)	*
Low	3.60	(0.39)	[1]	1.00		

History of Physical Abuse

Yes	22.00	(1.98)	[2]	2.47	(1.92, 3.19)	*
No	10.24	(0.53)	[1]	1.00		

History of Sexual Abuse

Yes	23.44	(2.01)	[2]	2.74	(2.14, 3.51)	*
No	10.05	(0.53)	[1]	1.00		

Risk-Taking

High Risk Taking	22.86	(2.41)	[2]	2.53	(1.89, 3.38)	*
Low-Moderate Risk Taking	10.49	(0.54)	[1]	1.00		

Religiosity/Spirituality

High	10.70	(1.02)		1.00		
Medium	11.54	(0.89)		1.09	(0.83, 1.43)	
Low	12.44	(1.40)		1.19	(0.85, 1.65)	
Not Applicable	12.44	(1.09)		1.19	(0.89, 1.58)	

Table 5.5 – High Anxiety – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30 Days

Yes	11.26	(0.55)		1.00	
No	14.96	(2.03)		1.39	(1.00, 1.93)

Heavy Alcohol Use, Past 12 Months

Yes	23.99	(2.59)	[2]	2.64	(1.96, 3.56)	*
No	10.68	(0.53)	[1]	1.00		

Current Smoker

Yes	14.86	(1.34)	[2]	1.43	(1.12, 1.81)	*
No	10.91	(0.57)	[1]	1.00		

Depression

High	56.12	(3.46)	[2]	13.09	(9.71, 17.64)	*
Low	8.90	(0.49)	[1]	1.00		

Anger

High	56.00	(4.55)	[2]	11.25	(7.71, 16.40)	*
Low	10.16	(0.52)	[1]	1.00		

Resilience

Low resilience	17.85	(3.26)	[3]	2.91	(1.79, 4.74)	*
Moderate resilience	13.85	(0.75)	[3]	2.16	(1.68, 2.77)	*
High resilience	6.94	(0.72)	[1,2]	1.00		

Possible PTS

Possible PTS	82.37	(4.45)	[2]	41.29	(22.50, 75.77)	*
Unlikely PTS	10.17	(0.51)	[1]	1.00		

Suicidal Ideation Since Joining Military

Yes	24.14	(4.08)	[2]	2.51	(1.61, 3.93)	*
No	11.24	(0.53)	[1]	1.00		

Self-Inflicted Injury, Lifetime History

Yes	31.48	(2.69)	[2]	4.18	(3.19, 5.47)	*
No	9.90	(0.52)	[1]	1.00		

Positive Coping

Yes	9.64	(0.61)	[2]	0.60	(0.49, 0.74)	*
No	15.07	(1.00)	[1]	1.00		

Table 5.5 – High Anxiety – Prevalence Rates and Odds Ratios

Avoidance Coping

Yes	19.77	(1.13)	[2]	3.03	(2.47, 3.73)	*
No	7.52	(0.54)	[1]	1.00	

Social Network Facilitation - Alcohol

Yes	11.85	(0.55)		1.35	(0.86, 2.10)
No	9.08	(1.82)		1.00	

Social Network Facilitation - Cigarettes

Yes	12.94	(0.65)	[2]	1.63	(1.27, 2.09)	*
No	8.36	(0.86)	[1]	1.00	

Social Network Facilitation - Smokeless

Yes	12.26	(0.68)		1.18	(0.95, 1.46)
No	10.60	(0.83)		1.00	

Social Network Facilitation - RxDrugs

Yes	26.73	(3.47)	[2]	2.96	(2.06, 4.25)	*
No	10.98	(0.53)	[1]	1.00	

Leadership Deterrence - Alcohol

Yes	9.70	(0.69)	[2]	0.67	(0.55, 0.82)	*
No	13.80	(0.81)	[1]	1.00	

Leadership Deterrence - Cigarettes

Yes	9.80	(0.64)	[2]	0.65	(0.53, 0.79)	*
No	14.34	(0.90)	[1]	1.00	

Leadership Deterrence - Smokeless

Yes	9.64	(0.65)	[2]	0.65	(0.53, 0.79)	*
No	14.18	(0.87)	[1]	1.00	

Leadership Deterrence - RxDrugs

Yes	11.50	(0.55)		0.82	(0.58, 1.16)
No	13.71	(2.00)		1.00	

Age of onset for alcohol use

14 years old or younger	18.42	(1.60)	[2,3,4]	2.02	(1.20, 3.41)	*
15 to 17 years old	11.73	(0.86)	[1]	1.19	(0.72, 1.97)
18 to 20 years old	9.08	(0.93)	[1]	0.89	(0.53, 1.52)
21 years old or older	9.40	(1.26)	[1]	0.93	(0.53, 1.63)
I have never consumed alcohol	10.05	(2.21)		1.00	

Table 5.5 – High Anxiety – Prevalence Rates and Odds Ratios						
Age of onset for tobacco use						
14 years old or younger	17.67	(2.54)	3,5	1.89	(1.31, 2.74)	*
15 to 17 years old	15.40	(1.51)	5	1.61	(1.23, 2.10)	*
18 to 20 years old	10.18	(1.34)	1	1.00	(0.73, 1.38)	
21 years old or older	14.19	(2.51)		1.46	(0.95, 2.23)	
I have never smoked cigarettes	10.18	(0.65)	1,2	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having a high level of anxiety. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high anxiety; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Anxiety Level, Past 30 Days, Q126A-D).

Table 5.6 – High Anger – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	3.44	(0.31)			
Platform					
Ashore	3.12	(0.35)	[2]	1.76	(0.81, 3.84)
Afloat	5.45	(0.84)	[1,3]	2.71	(1.20, 6.12)	*
Aviation	1.47	(0.65)	[2]	1.00	
Gender					
Male	3.42	(0.33)		0.99	(0.62, 1.58)
Female	3.54	(0.84)		1.00	
Pay Grade					
E1-E4	3.50	(0.56)		1.82	(0.80, 4.12)
E5-E6	4.30	(0.55)		2.14	(0.97, 4.73)
E7-E9	2.52	(0.77)		1.12	(0.43, 2.87)
W01-W05	2.86	(1.45)		1.40	(0.44, 4.46)
O1-O3	2.54	(0.85)		1.76	(0.70, 4.42)
O4-O10	1.51	(0.80)		1.00	
Age Group					
18-20	9.45	(3.41)	[4,5]	16.84	(2.12, 133.65)	*
21-25	3.83	(0.72)		6.42	(0.91, 45.51)
26-35	3.75	(0.49)		6.30	(0.91, 43.78)
36-45	2.87	(0.63)	[1]	4.76	(0.66, 34.18)
46-65	0.62	(0.60)	[1]	1.00	
Race/Ethnicity					
White, non-Hispanic	3.78	(0.36)		1.00	
African American, non-Hispanic	3.70	(1.43)		0.98	(0.44, 2.20)
Hispanic	1.32	(0.56)		0.34	(0.14, 0.81)	*
Other	2.86	(1.34)		0.75	(0.29, 1.97)
Education					
High school or less	3.78	(0.69)		1.59	(0.90, 2.81)
Some college	3.79	(0.44)		1.60	(0.98, 2.60)
College graduate or higher	2.41	(0.51)		1.00	

Table 5.6 – High Anger – Prevalence Rates and Odds Ratios

Family Status

Not married	3.38	(0.52)		0.99	(0.67, 1.47)
Married, spouse not present	4.05	(1.21)		1.20	(0.62, 2.31)
Married, spouse present	3.40	(0.40)		1.00	

Children Living With You

Yes	3.28	(0.45)		1.00	
No	3.56	(0.41)		1.09	(0.76, 1.57)

Combat Deployed in Past Year

Yes	5.80	(2.02)		1.78	(0.84, 3.74)
No	3.35	(0.31)		1.00	

Average Hours of Nightly Sleep

9+ hours	3.68	(1.69)		2.14	(0.78, 5.87)
7-8 hours	1.75	(0.33)	3,4	1.00	
5-6 hours	4.50	(0.55)	2	2.64	(1.68, 4.16) *
4 hours or less	10.02	(2.81)	2	6.25	(3.06, 12.79) *

Overall Stress in Past 12 Months

High	7.23	(0.72)	2	6.17	(4.03, 9.46) *
Low	1.25	(0.23)	1	1.00	

History of Physical Abuse

Yes	8.50	(1.36)	2	3.26	(2.18, 4.88) *
No	2.77	(0.29)	1	1.00	

History of Sexual Abuse

Yes	6.38	(1.17)	2	2.17	(1.40, 3.35) *
No	3.05	(0.31)	1	1.00	

Risk-Taking

High Risk Taking	12.20	(1.89)	2	5.10	(3.40, 7.66) *
Low-Moderate Risk Taking	2.65	(0.28)	1	1.00	

Religiosity/Spirituality

High	2.83	(0.56)		1.00	
Medium	2.27	(0.42)	3,4	0.80	(0.46, 1.38)
Low	5.27	(0.96)	2	1.91	(1.10, 3.30) *
Not Applicable	4.59	(0.70)	2	1.65	(1.00, 2.74)

Table 5.6 – High Anger – Prevalence Rates and Odds Ratios

Vigorous Physical Exercise, Past 30 Days

Yes	3.34	(0.32)		1.00		
No	5.06	(1.28)		1.54	(0.89, 2.69)	

Heavy Alcohol Use, Past 12 Months

Yes	6.55	(1.52)	[2]	2.13	(1.26, 3.59)	*
No	3.19	(0.31)	[1]	1.00		

Current Smoker

Yes	5.72	(0.89)	[2]	2.04	(1.38, 3.01)	*
No	2.90	(0.31)	[1]	1.00		

Depression

High	17.72	(2.71)	[2]	8.06	(5.29, 12.29)	*
Low	2.60	(0.28)	[1]	1.00		

Anxiety

High	16.25	(1.82)	[2]	11.25	(7.71, 16.40)	*
Low	1.70	(0.23)	[1]	1.00		

Resilience

Low resilience	4.83	(1.81)		2.11	(0.90, 4.94)	
Moderate resilience	3.92	(0.42)	[3]	1.69	(1.10, 2.60)	*
High resilience	2.35	(0.43)	[2]	1.00		

Possible PTS

Possible PTS	38.61	(5.82)	[2]	22.28	(13.25, 37.48)	*
Unlikely PTS	2.74	(0.28)	[1]	1.00		

Suicidal Ideation Since Joining Military

Yes	7.83	(2.58)	[2]	2.50	(1.22, 5.14)	*
No	3.29	(0.30)	[1]	1.00		

Self-Inflicted Injury, Lifetime History

Yes	10.80	(1.80)	[2]	4.25	(2.79, 6.48)	*
No	2.77	(0.29)	[1]	1.00		

Positive Coping

Yes	2.72	(0.34)	[2]	0.60	(0.42, 0.87)	*
No	4.43	(0.58)	[1]	1.00		

Table 5.6 – High Anger – Prevalence Rates and Odds Ratios						
Avoidance Coping						
Yes	5.35	(0.65)	[2]	2.24	(1.56, 3.22)	*
No	2.46	(0.32)	[1]	1.00		
Social Network Facilitation - Alcohol						
Yes	3.29	(0.31)		0.63	(0.35, 1.15)	
No	5.12	(1.42)		1.00		
Social Network Facilitation - Cigarettes						
Yes	3.71	(0.37)		1.36	(0.88, 2.09)	
No	2.75	(0.52)		1.00		
Social Network Facilitation - Smokeless						
Yes	3.87	(0.41)		1.45	(0.98, 2.16)	
No	2.70	(0.45)		1.00		
Social Network Facilitation - RxDrugs						
Yes	6.93	(2.03)	[2]	2.19	(1.15, 4.17)	*
No	3.28	(0.31)	[1]	1.00		
Leadership Deterrence - Alcohol						
Yes	2.96	(0.40)		0.73	(0.51, 1.06)	
No	4.00	(0.47)		1.00		
Leadership Deterrence - Cigarettes						
Yes	2.64	(0.35)	[2]	0.57	(0.39, 0.81)	*
No	4.58	(0.54)	[1]	1.00		
Leadership Deterrence - Smokeless						
Yes	2.52	(0.35)	[2]	0.53	(0.37, 0.77)	*
No	4.64	(0.53)	[1]	1.00		
Leadership Deterrence - RxDrugs						
Yes	3.34	(0.32)		0.73	(0.40, 1.32)	
No	4.52	(1.23)		1.00		
Age of onset for alcohol use						
14 years old or younger	5.15	(0.93)	[4]	0.83	(0.41, 1.70)	
15 to 17 years old	3.67	(0.51)		0.58	(0.30, 1.14)	
18 to 20 years old	2.55	(0.52)		0.40	(0.19, 0.83)	*
21 years old or older	1.68	(0.56)	[1,5]	0.26	(0.11, 0.65)	*
I have never consumed alcohol	6.11	(1.77)	[4]	1.00		

Table 5.6 – High Anger – Prevalence Rates and Odds Ratios

Age of onset for tobacco use						
14 years old or younger	7.91	(1.83)	5	3.22	(1.84, 5.63)	*
15 to 17 years old	4.64	(0.90)		1.82	(1.13, 2.94)	*
18 to 20 years old	3.36	(0.81)		1.30	(0.74, 2.28)	
21 years old or older	4.32	(1.48)		1.69	(0.80, 3.58)	
I have never smoked cigarettes	2.60	(0.35)	1	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having high anger propensity. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high anger; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (High Anger Propensity, Q134, Q139C, Q139I, Q168B).

Characteristic[a]	USCG			
	Prevalence		Odds Ratio[b] (95% CI)	
Total	2.40	(0.25)		
Platform				
Ashore	2.01	(0.28)	0.71	(0.36, 1.40)
Afloat	3.49	(0.67)	1.28	(0.61, 2.66)
Aviation	2.84	(0.88)	1.00	
Gender				
Male	2.07	(0.25) [2]	0.45	(0.28, 0.71) *
Female	4.47	(0.92) [1]	1.00	
Pay Grade				
E1-E4	2.83	(0.49)	1.23	(0.53, 2.84)
E5-E6	2.24	(0.40)	1.12	(0.49, 2.55)
E7-E9	2.15	(0.70)	1.37	(0.55, 3.45)
W01-W05	1.77	(1.13)	0.90	(0.23, 3.54)
O1-O3	2.44	(0.81)	1.17	(0.45, 3.07)
O4-O10	1.99	(0.90)	1.00	
Age Group				
18-20	4.57	(2.44)	1.73	(0.42, 7.15)
21-25	1.79	(0.49)	0.66	(0.23, 1.91)
26-35	2.75	(0.42)	1.02	(0.39, 2.67)
36-45	1.79	(0.49)	0.66	(0.23, 1.91)
46-65	2.69	(1.22)	1.00	
Race/Ethnicity				
White, non-Hispanic	2.33	(0.28)	1.00	
African American, non-Hispanic	4.02	(1.46)	1.76	(0.81, 3.81)
Hispanic	1.92	(0.66)	0.82	(0.40, 1.71)
Other	3.11	(1.36)	1.34	(0.54, 3.36)
Education				
High school or less	2.45	(0.55)	0.99	(0.54, 1.84)
Some college	2.35	(0.34)	0.95	(0.57, 1.59)
College graduate or higher	2.46	(0.51)	1.00	

Family Status					
Not married	2.74	(0.46)	[2]	1.57	(0.99, 2.51)	
Married, spouse not present	5.91	(1.43)	[1,3]	3.50	(1.92, 6.36)	*
Married, spouse present	1.76	(0.28)	[2]	1.00		
Children Living With You						
Yes	1.91	(0.34)		1.00		
No	2.78	(0.36)		1.47	(0.94, 2.29)	
Combat Deployed in Past Year						
Yes	3.35	(1.52)		1.42	(0.55, 3.64)	
No	2.39	(0.26)		1.00		
Average Hours of Nightly Sleep						
9+ hours	1.24	(0.99)		0.82	(0.16, 4.15)	
7-8 hours	1.51	(0.30)	[3,4]	1.00		
5-6 hours	3.36	(0.47)	[2]	2.27	(1.39, 3.72)	*
4 hours or less	5.73	(2.16)	[2]	3.97	(1.65, 9.54)	*
Overall Stress in Past 12 Months						
High	4.65	(0.57)	[2]	4.31	(2.72, 6.85)	*
Low	1.12	(0.22)	[1]	1.00		
History of Physical Abuse						
Yes	5.58	(1.10)	[2]	2.95	(1.83, 4.76)	*
No	1.96	(0.25)	[1]	1.00		
History of Sexual Abuse						
Yes	6.40	(1.16)	[2]	3.72	(2.35, 5.89)	*
No	1.80	(0.24)	[1]	1.00		
Risk-Taking						
High Risk Taking	4.32	(1.16)	[2]	1.95	(1.07, 3.53)	*
Low-Moderate Risk Taking	2.26	(0.26)	[1]	1.00		
Religiosity/Spirituality						
High	1.75	(0.43)		1.00		
Medium	2.26	(0.42)		1.30	(0.70, 2.41)	
Low	2.95	(0.72)		1.71	(0.85, 3.43)	
Not Applicable	2.82	(0.55)		1.63	(0.87, 3.06)	

Table 5.7 – Suicidal Ideation or Attempt, Past Year – Prevalence Rates and Odds Ratios						
Vigorous Physical Exercise, Past 30						
Yes	2.31	(0.26)		1.00		
No	3.05	(0.99)		1.33	(0.67, 2.66)	
Heavy Alcohol Use, Past 12 Months						
Yes	5.29	(1.35)	[2]	2.57	(1.44, 4.57)	*
No	2.13	(0.25)	[1]	1.00		
Current Smoker						
Yes	3.04	(0.65)		1.36	(0.83, 2.23)	
No	2.25	(0.27)		1.00		
Depression						
High	10.18	(2.11)	[2]	5.74	(3.44, 9.58)	*
Low	1.94	(0.24)	[1]	1.00		
Anxiety						
High	8.92	(1.39)	[2]	6.20	(4.00, 9.59)	*
Low	1.56	(0.22)	[1]	1.00		
Anger						
High	9.47	(2.66)	[2]	4.64	(2.43, 8.87)	*
Low	2.21	(0.25)	[1]	1.00		
Resilience						
Low resilience	5.81	(1.96)	[3]	4.74	(2.01, 11.17)	*
Moderate resilience	2.88	(0.36)	[3]	2.28	(1.31, 3.97)	*
High resilience	1.28	(0.32)	[1,2]	1.00		
Possible PTS						
Possible PTS	15.94	(4.32)	[2]	9.06	(4.64, 17.69)	*
Unlikely PTS	2.05	(0.24)	[1]	1.00		
Self-Inflicted Injury, Lifetime History						
Yes	12.21	(1.89)	[2]	9.10	(5.85, 14.18)	*
No	1.50	(0.21)	[1]	1.00		
Positive Coping						
Yes	1.33	(0.24)	[2]	0.32	(0.20, 0.50)	*
No	4.08	(0.55)	[1]	1.00		

Avoidance Coping

Yes	4.60	(0.59)	2	3.79	(2.42, 5.93)	*
No	1.26	(0.23)	1	1.00		

Social Network Facilitation - Alcohol

Yes	2.38	(0.26)	0.84	(0.39, 1.81)	
No	2.84	(1.04)	1.00		

Social Network Facilitation - Cigarettes

Yes	2.67	(0.31)	1.55	(0.92, 2.62)	
No	1.74	(0.41)	1.00		

Social Network Facilitation - Smokeless

Yes	2.19	(0.31)	0.78	(0.51, 1.20)	
No	2.78	(0.45)	1.00		

Social Network Facilitation - RxDrugs

Yes	6.65	(1.96)	2	3.15	(1.63, 6.07)	*
No	2.21	(0.25)	1	1.00		

Leadership Deterrence - Alcohol

Yes	1.79	(0.31)	2	0.58	(0.38, 0.90)	*
No	3.03	(0.40)	1	1.00		

Leadership Deterrence - Cigarettes

Yes	1.89	(0.29)	2	0.59	(0.39, 0.90)	*
No	3.16	(0.45)	1	1.00		

Leadership Deterrence - Smokeless

Yes	1.96	(0.31)	2	0.65	(0.42, 0.99)	*
No	3.00	(0.42)	1	1.00		

Leadership Deterrence - RxDrugs

Yes	2.24	(0.26)	2	0.50	(0.28, 0.90)	*
No	4.40	(1.18)	1	1.00		

Age of onset for alcohol use

14 years old or younger	4.53	(0.87)	2	3.31	(0.94, 11.63)
15 to 17 years old	2.03	(0.38)	1	1.45	(0.41, 5.05)
18 to 20 years old	2.15	(0.47)		1.53	(0.43, 5.47)
21 years old or older	1.67	(0.56)		1.19	(0.30, 4.64)
I have never consumed alcohol	1.42	(0.85)		1.00	

Table 5.7 – Suicidal Ideation or Attempt, Past Year – Prevalence Rates and Odds Ratios				
Age of onset for tobacco use				
14 years old or younger	3.37	(1.19)	1.43	(0.66, 3.08)
15 to 17 years old	2.37	(0.64)	1.00	(0.54, 1.82)
18 to 20 years old	1.78	(0.59)	0.74	(0.36, 1.51)
21 years old or older	3.22	(1.27)	1.37	(0.59, 3.16)
I have never smoked cigarettes	2.38	(0.33)	1.00	

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who reported suicidal ideation or a suicide attempt in the past 12 months. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting suicidal ideation or attempt in the past year; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Suicidal Ideation, Q137, Q137A; Suicide Attempt, Q138, Q138A).

Table 5.8 – History of Physical Abuse – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	11.92	(0.53)			
Platform					
Ashore	12.37	(0.65)	[3]	1.36	(0.94, 1.96)
Afloat	12.37	(1.19)		1.39	(0.93, 2.09)
Aviation	7.74	(1.42)	[1]	1.00	
Gender					
Male	11.14	(0.56)	[2]	0.53	(0.43, 0.67) *
Female	16.88	(1.67)	[1]	1.00	
Pay Grade					
E1-E4	11.26	(0.94)	[3]	0.96	(0.67, 1.38)
E5-E6	11.54	(0.86)	[3]	1.17	(0.83, 1.65)
E7-E9	17.86	(1.84)	[1,2,5]	1.68	(1.15, 2.45) *
W01-W05	16.78	(3.22)		1.62	(1.00, 2.64)
O1-O3	8.02	(1.44)	[3]	0.68	(0.43, 1.08)
O4-O10	9.53	(1.91)		1.00	
Age Group					
18-20	16.85	(4.33)		0.94	(0.46, 1.92)
21-25	9.47	(1.08)	[5]	0.49	(0.31, 0.77) *
26-35	11.23	(0.80)		0.59	(0.39, 0.89) *
36-45	12.62	(1.23)		0.67	(0.43, 1.05)
46-65	17.72	(2.90)	[2]	1.00	
Race/Ethnicity					
White, non-Hispanic	11.81	(0.60)		1.00	
African American, non-Hispanic	14.77	(2.63)		1.29	(0.85, 1.98)
Hispanic	11.57	(1.55)		0.98	(0.71, 1.34)
Other	11.72	(2.54)		0.99	(0.61, 1.62)
Education					
High school or less	12.20	(1.17)	[3]	1.53	(1.12, 2.11) *
Some college	13.48	(0.77)	[3]	1.72	(1.32, 2.24) *
College graduate or higher	8.31	(0.91)	[1,2]	1.00	

Table 5.8 – History of Physical Abuse – Prevalence Rates and Odds Ratios

Family Status

Not married	11.17	(0.89)	0.90	(0.72, 1.12)
Married, spouse not present	12.88	(2.03)	1.06	(0.73, 1.54)
Married, spouse present	12.25	(0.70)	1.00	

Children Living With You

Yes	12.91	(0.84)	1.00	
No	11.16	(0.69)	0.85	(0.69, 1.03)

Combat Deployed in Past Year

Yes	13.34	(2.89)	1.14	(0.69, 1.88)
No	11.90	(0.55)	1.00	

Average Hours of Nightly Sleep

9+ hours	11.04	(2.81)		1.29	(0.72, 2.32)
7-8 hours	8.75	(0.71)	3,4	1.00	
5-6 hours	14.67	(0.94)	2	1.79	(1.43, 2.25) *
4 hours or less	23.28	(3.94)	2	3.16	(1.99, 5.03) *

Overall Stress in Past 12 Months

High	17.06	(1.02)	2	2.09	(1.71, 2.55) *
Low	8.96	(0.59)	1	1.00	

History of Sexual Abuse

Yes	39.87	(2.32)	2	7.56	(6.02, 9.49) *
No	8.06	(0.48)	1	1.00	

Risk-Taking

High Risk Taking	16.86	(2.15)	2	1.55	(1.13, 2.13) *
Low-Moderate Risk Taking	11.57	(0.56)	1	1.00	

Religiosity/Spirituality

High	11.94	(1.07)	1.00	
Medium	12.38	(0.92)	1.04	(0.80, 1.35)
Low	9.83	(1.27)	0.80	(0.57, 1.13)
Not Applicable	12.35	(1.08)	1.04	(0.79, 1.37)

Vigorous Physical Exercise, Past 30 Days

Yes	11.33	(0.55)	2	1.00	
No	16.33	(2.11)	1	1.53	(1.11, 2.10) *

Table 5.8 – History of Physical Abuse – Prevalence Rates and Odds Ratios

Heavy Alcohol Use, Past 12 Months

Yes	16.80	(2.25)	[2]	1.55	(1.12, 2.17)	*
No	11.50	(0.55)	[1]	1.00		

Current Smoker

Yes	14.26	(1.31)	[2]	1.30	(1.02, 1.65)	*
No	11.37	(0.58)	[1]	1.00		

Depression

High	23.60	(2.96)	[2]	2.44	(1.74, 3.42)	*
Low	11.24	(0.54)	[1]	1.00		

Anxiety

High	22.61	(2.03)	[2]	2.47	(1.92, 3.19)	*
Low	10.56	(0.54)	[1]	1.00		

Anger

High	29.44	(4.14)	[2]	3.26	(2.18, 4.88)	*
Low	11.34	(0.54)	[1]	1.00		

Resilience

Low resilience	8.41	(2.35)	0.70	(0.38, 1.31)	
Moderate resilience	12.48	(0.71)	1.09	(0.88, 1.35)	
High resilience	11.55	(0.91)	1.00		

Possible PTS

Possible PTS	34.81	(5.57)	[2]	4.11	(2.52, 6.70)	*
Unlikely PTS	11.49	(0.53)	[1]	1.00		

Suicidal Ideation Since Joining Military

Yes	22.43	(4.00)	[2]	2.19	(1.38, 3.46)	*
No	11.68	(0.54)	[1]	1.00		

Self-Inflicted Injury - Lifetime

Yes	24.24	(2.48)	[2]	2.62	(1.97, 3.49)	*
No	10.89	(0.54)	[1]	1.00		

Positive Coping

Yes	12.60	(0.68)	1.20	(0.97, 1.49)	
No	10.71	(0.86)	1.00		

Table 5.8 – History of Physical Abuse – Prevalence Rates and Odds Ratios

Avoidance Coping

Yes	14.97	(1.01)	2	1.53	(1.25, 1.88)	*
No	10.30	(0.62)	1	1.00		

Social Network Facilitation - Alcohol

Yes	12.19	(0.56)		1.44	(0.92, 2.25)	
No	8.80	(1.79)		1.00		

Social Network Facilitation - Cigarettes

Yes	13.24	(0.66)	2	1.63	(1.27, 2.08)	*
No	8.57	(0.87)	1	1.00		

Social Network Facilitation - Smokeless

Yes	12.51	(0.69)		1.17	(0.95, 1.44)	
No	10.89	(0.84)		1.00		

Social Network Facilitation - RxDrugs

Yes	25.33	(3.40)	2	2.67	(1.85, 3.85)	*
No	11.28	(0.53)	1	1.00		

Leadership Deterrence - Alcohol

Yes	11.61	(0.75)		0.94	(0.77, 1.15)	
No	12.28	(0.77)		1.00		

Leadership Deterrence - Cigarettes

Yes	11.80	(0.70)		0.97	(0.79, 1.19)	
No	12.11	(0.83)		1.00		

Leadership Deterrence - Smokeless

Yes	12.23	(0.72)		1.07	(0.88, 1.31)	
No	11.51	(0.79)		1.00		

Leadership Deterrence - RxDrugs

Yes	11.98	(0.56)		1.03	(0.71, 1.50)	
No	11.64	(1.86)		1.00		

Age of onset for alcohol use

14 years old or younger	17.79	(1.58)	2,3,4	1.81	(1.09, 3.02)	*
15 to 17 years old	11.88	(0.86)	1	1.13	(0.69, 1.84)	
18 to 20 years old	11.11	(1.02)	1	1.05	(0.63, 1.74)	
21 years old or older	7.77	(1.15)	1	0.71	(0.40, 1.24)	
I have never consumed any alcohol	10.67	(2.26)		1.00		

Table 5.8 – History of Physical Abuse – Prevalence Rates and Odds Ratios

Age of onset for tobacco use						
14 years old or younger	21.52	(2.73)	3,4,5	2.36	(1.67, 3.33)	*
15 to 17 years old	15.32	(1.51)	5	1.56	(1.19, 2.03)	*
18 to 20 years old	11.43	(1.41)	1	1.11	(0.82, 1.51)	
21 years old or older	9.19	(2.06)	1	0.87	(0.53, 1.44)	
I have never smoked cigarettes	10.40	(0.65)	1,2	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who reported a history of physical abuse. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting a history of physical abuse; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Physical Abuse History, Q127A-C).

Table 5.9 – History of Sexual Abuse – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	12.2	(0.54)			
Platform					
Ashore	13.36	(0.67)	[2]	1.17	(0.81, 1.70)
Afloat	9.59	(1.07)	[1]	1.15	(0.75, 1.74)
Aviation	8.98	(1.52)		1.00	
Gender					
Male	8.27	(0.49)	[2]	0.14	(0.11, 0.17) *
Female	36.71	(2.15)	[1]	1.00	
Pay Grade					
E1-E4	11.33	(0.94)		0.47	(0.33, 0.66) *
E5-E6	11.19	(0.85)		0.68	(0.49, 0.93) *
E7-E9	12.88	(1.61)		0.76	(0.52, 1.11)
W01-W05	13.71	(2.96)		0.84	(0.51, 1.40)
O1-O3	14.26	(1.85)		0.55	(0.37, 0.83) *
O4-O10	16.43	(2.40)		1.00	
Age Group					
18-20	10.64	(3.57)		0.56	(0.24, 1.28)
21-25	10.92	(1.15)		0.57	(0.36, 0.90) *
26-35	13.31	(0.86)		0.72	(0.47, 1.09)
36-45	10.65	(1.14)		0.56	(0.35, 0.88) *
46-65	17.63	(2.91)		1.00	
Race/Ethnicity					
White, non-Hispanic	11.77	(0.60)		1.00	
African American, non-Hispanic	16.62	(2.76)		1.49	(1.00, 2.24)
Hispanic	12.96	(1.62)		1.12	(0.82, 1.51)
Other	10.64	(2.43)		0.89	(0.54, 1.49)
Education					
High school or less	8.41	(0.99)	[2,3]	0.53	(0.39, 0.72) *
Some college	12.41	(0.74)	[1]	0.81	(0.65, 1.02)
College graduate or higher	14.82	(1.17)	[1]	1.00	

Table 5.9 – History of Sexual Abuse – Prevalence Rates and Odds Ratios

Family Status

Not married	12.30	(0.93)		1.07	(0.86, 1.32)	
Married, spouse not present	15.84	(2.21)		1.43	(1.01, 2.03)	*
Married, spouse present	11.63	(0.69)		1.00		

Children Living With You

Yes	12.38	(0.82)		1.00		
No	11.98	(0.71)		0.96	(0.79, 1.18)	

Combat Deployed in Past Year

Yes	11.67	(2.72)		0.94	(0.56, 1.59)	
No	12.30	(0.56)		1.00		

Average Hours of Nightly Sleep

9+ hours	16.57	(3.32)		1.91	(1.16, 3.15)	*
7-8 hours	9.41	(0.73)	3,4	1.00		
5-6 hours	13.81	(0.91)	2	1.54	(1.23, 1.93)	*
4 hours or less	19.19	(3.67)	2	2.29	(1.40, 3.74)	*

Overall Stress in Past 12 Months

High	18.70	(1.06)	2	2.52	(2.06, 3.08)	*
Low	8.37	(0.57)	1	1.00		

History of Physical Abuse

Yes	40.60	(2.35)	2	7.56	(6.02, 9.49)	*
No	8.29	(0.48)	1	1.00		

Risk-Taking

High Risk Taking	16.28	(2.11)	2	1.44	(1.04, 1.98)	*
Low-Moderate Risk Taking	11.93	(0.57)	1	1.00		

Religiosity/Spirituality

High	14.63	(1.16)		1.00		
Medium	11.93	(0.90)		0.79	(0.62, 1.01)	
Low	10.16	(1.28)		0.66	(0.47, 0.92)	*
Not Applicable	11.04	(1.03)		0.72	(0.55, 0.95)	*

Vigorous Physical Exercise, Past 30 Days

Yes	11.81	(0.56)	2	1.00		
No	16.63	(2.12)	1	1.49	(1.08, 2.05)	*

Table 5.9 – History of Sexual Abuse – Prevalence Rates and Odds Ratios						
Heavy Alcohol Use, Past 12 Months						
Yes	15.64	(2.19)		1.38	(0.98, 1.94)	
No	11.86	(0.55)		1.00		
Current Smoker						
Yes	11.66	(1.20)		0.94	(0.73, 1.21)	
No	12.29	(0.60)		1.00		
Depression						
High	20.41	(2.81)	[2]	1.94	(1.36, 2.77)	*
Low	11.66	(0.55)	[1]	1.00		
Anxiety						
High	24.47	(2.08)	[2]	2.74	(2.14, 3.51)	*
Low	10.57	(0.54)	[1]	1.00		
Anger						
High	22.65	(3.80)	[2]	2.17	(1.40, 3.35)	*
Low	11.89	(0.55)	[1]	1.00		
Resilience						
Low resilience	8.99	(2.42)		0.77	(0.42, 1.42)	
Moderate resilience	13.08	(0.73)		1.18	(0.95, 1.46)	
High resilience	11.31	(0.90)		1.00		
Possible PTS						
Possible PTS	29.76	(5.36)	[2]	3.17	(1.90, 5.28)	*
Unlikely PTS	11.79	(0.54)	[1]	1.00		
Suicidal Ideation Since Joining Military						
Yes	27.11	(4.23)	[2]	2.78	(1.81, 4.28)	*
No	11.79	(0.54)	[1]	1.00		
Self-Inflicted Injury - Lifetime						
Yes	31.05	(2.68)	[2]	3.81	(2.91, 4.98)	*
No	10.57	(0.53)	[1]	1.00		
Positive Coping						
Yes	12.67	(0.69)		1.16	(0.94, 1.44)	
No	11.10	(0.87)		1.00		

Table 5.9 – History of Sexual Abuse – Prevalence Rates and Odds Ratios						
Avoidance Coping						
Yes	16.86	(1.06)	2	1.90	(1.56, 2.33)	*
No	9.63	(0.60)	1	1.00		
Social Network Facilitation - Alcohol						
Yes	12.37	(0.56)		1.34	(0.87, 2.06)	
No	9.55	(1.85)		1.00		
Social Network Facilitation - Cigarettes						
Yes	12.40	(0.64)		1.08	(0.87, 1.35)	
No	11.56	(0.99)		1.00		
Social Network Facilitation - Smokeless						
Yes	11.14	(0.65)	2	0.78	(0.64, 0.96)	*
No	13.81	(0.93)	1	1.00		
Social Network Facilitation - RxDrugs						
Yes	19.51	(3.11)	2	1.81	(1.21, 2.70)	*
No	11.81	(0.54)	1	1.00		
Leadership Deterrence - Alcohol						
Yes	11.34	(0.74)		0.85	(0.70, 1.03)	
No	13.11	(0.79)		1.00		
Leadership Deterrence - Cigarettes						
Yes	11.31	(0.68)		0.83	(0.68, 1.01)	
No	13.37	(0.87)		1.00		
Leadership Deterrence - Smokeless						
Yes	11.14	(0.69)	2	0.81	(0.66, 0.99)	*
No	13.40	(0.85)	1	1.00		
Leadership Deterrence - RxDrugs						
Yes	11.98	(0.56)		0.83	(0.59, 1.16)	
No	14.16	(2.02)		1.00		
Age of onset for alcohol use						
14 years old or younger	17.19	(1.56)	2,3,4,5	2.26	(1.29, 3.97)	*
15 to 17 years old	12.19	(0.87)	1	1.51	(0.88, 2.60)	
18 to 20 years old	11.99	(1.06)	1	1.48	(0.85, 2.58)	
21 years old or older	8.32	(1.19)	1	0.99	(0.54, 1.81)	
I have never consumed any alcohol	8.40	(2.04)	1	1.00		

Table 5.9 – History of Sexual Abuse – Prevalence Rates and Odds Ratios

Age of onset for tobacco use

14 years old or younger	20.08	(2.67)	3,4,5	1.88	(1.32, 2.67)	*
15 to 17 years old	12.84	(1.40)		1.10	(0.84, 1.45)	
18 to 20 years old	10.63	(1.36)	1	0.89	(0.65, 1.21)	
21 years old or older	9.21	(2.07)	1	0.76	(0.46, 1.25)	
I have never smoked cigarettes	11.80	(0.69)	1	1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who reported a history of sexual abuse. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting a history of sexual abuse; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Sexual Abuse History, Q127D-F).

Chapter 6 ■ Lesbian, Gay, and Bisexual Service Members: A First Look

Chapter 6: Lesbian, Gay, and Bisexual Service Members: A First Look

The 2011 HRB was the first military-sponsored survey that asked USCG members to identify their sexual identity and orientation. In this chapter, we present a first look at the overall percentage of USCG members identifying as lesbian, gay, or bisexual (LGB) and the demographic composition of LGB service members. We also present the results of an exploratory analysis identifying factors that were associated with sexual orientation, including physical and psychological health as well as substance use. A table presenting results for each outcome measure is at the end of the chapter. A figure is also presented that shows prevalence rates of six variables that had significant differences by sexual orientation.

Measuring Sexual Orientation

Respondents were asked two questions regarding their sexuality. The questions were based on items included in the Centers for Disease Control and Prevention's National Survey of Family Growth (NSFG). The first question asked respondents about their sexual identity, as follows:

Do you think of yourself as…?

1. Heterosexual ('straight')
2. Gay or Lesbian
3. Bisexual
4. Something else
5. Not at all sure

The second question asked respondents about their sexual attraction, as follows:

People are different in their sexual attraction to other people. Which best describes your feelings?

1. Only attracted to males
2. Mostly attracted to males
3. Equally attracted to males and females
4. Mostly attracted to females
5. Only attracted to females
6. Not attracted to either males or females
7. Not sure

6.1 Lesbian, Gay, and Bisexual Service Members

Among active duty USCG personnel, 95.8% identified as heterosexual ('Straight') and 2.3% identified as lesbian, gay, or bisexual (LGB); 0.7% identified as "Something else" and another 1.1% indicated they were "Not at all sure." Male USCG personnel were more likely than female USCG personnel to identify as heterosexual (97.1% vs. 87.8%); females were more likely than males to identify as gay or lesbian (5.2% vs. 0.6%), or bisexual (3.9% vs. 0.6%) (see Table 6.1).

Table 6.1 – Sexual Orientation Among USCG Personnel by Gender[1]			
	Percent (SE)		
Sexual Orientation	Total	Males	Females
Heterosexual ('Straight')	95.82 (0.32)	97.09 (0.29)[b]	87.83 (1.42)[a]
Gay or Lesbian	1.24 (0.18)	0.61 (0.13)[b]	5.21 (0.97)[a]
Bisexual	1.07 (0.17)	0.62 (0.14)[b]	3.93 (0.84)[a]
Something else	0.74 (0.14)	0.70 (0.14)	1.00 (0.43)
Not at all sure	1.13 (0.17)	0.98 (0.17)[b]	2.03 (0.61)[a]

Response options for the sexual attraction question were recoded from "only attracted to males/females" to reflect whether the respondent indicated an attraction to the opposite sex or to the same sex. Among active duty USCG personnel, 92.5% indicated they were only attracted to the opposite sex; males were more likely to indicate that they were only attracted to the opposite sex than females (95.0% vs. 76.8%). Overall, 1.0% of USCG personnel indicated they were only attracted to the same sex and 0.5% indicated they were mostly attracted to the same sex. Females were more likely to indicate a same sex attraction than males, including only same sex attraction (3.8% vs. 0.6%) and mostly same sex attraction (2.7% vs. 0.2%). A small percentage of personnel (0.4%) indicated they were attracted to both sexes equally (see Table 6.2).

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[1] Note: Table displays the percentage of USCG personnel who identified with each of the sexual orientation groups listed in the 2011 HRB survey question 98. The standard error of each estimate is presented in parentheses.
Significance tests were conducted by gender within each sexual orientation group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the column # within the same group:
   [a]Indicates estimate is significantly different from the estimate in column #2 (Males) at the 95% confidence level after Bonferroni adjustment.
   [b]Indicates estimate is significantly different from the estimate in column #3 (Females) at the 95% confidence level after Bonferroni adjustment.

Table 6.2 –Sexual Attraction Among USCG Personnel by Gender [2]						
	Percent (SE)					
Type of Sexual Attraction	Total		Males		Females	
Opposite sex only	92.50	(0.42)	95.00	(0.38)[b]	76.79	(1.84)[a]
Opposite sex mostly	4.47	(0.33)	3.05	(0.30)[b]	13.41	(1.48)[a]
Attracted to both sexes equally	0.41	(0.10)	0.19	(0.08)[b]	1.77	(0.57)[a]
Same sex mostly	0.53	(0.12)	0.18	(0.07)[b]	2.73	(0.71)[a]
Same sex only	1.01	(0.16)	0.57	(0.13)[b]	3.79	(0.83)[a]
Not attracted to either	0.17	(0.07)	0.15	(0.07)	0.35	(0.26)
Not sure	0.91	(0.15)	0.87	(0.16)	1.16	(0.46)

6.2 Comparing the USCG to Civilian Estimates

Results from the 2010 General Social Survey (GSS) were used to compare sexual orientation classification among the civilian community with the USCG community (see Table 6.3). We chose to use the GSS for civilian comparisons rather than the NSFG, from which the survey items were based, due to the fact that the NSFG only includes 18-44 year olds, limiting the comparability of the sample to the USCG. The GSS contained a similar question to the HRB and allowed us to include 18-65 year olds in the comparison. Overall, the USCG and civilian sexual orientation composition were similar.[3] When examining results by gender, a lower percentage of female USCG members identified as heterosexual compared to civilians (88.6% vs. 94.0%); the percentage of female USCG personnel who identified as gay or lesbian was also higher than that of female civilians (5.3% vs. 1.5%). The sexual orientation composition of males was comparable between USCG personnel and civilians.

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[2] Table displays the percentage of USCG personnel who indicated each of the sexual attraction categories listed in the 2011 HRB survey question 99. The standard error of each estimate is presented in parentheses. Some estimates round to 0.0% which meets criteria for suppression; because this is a first look at sexual orientation in the Coast Guard, we did not suppress these estimates. Significance tests were conducted by gender within each sexual attraction group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the column # within the same group:

[a]Indicates estimate is significantly different from the estimate in column #2 (Males) at the 95% confidence level after Bonferroni adjustment.

[b]Indicates estimate is significantly different from the estimate in column #3 (Females) at the 95% confidence level after Bonferroni adjustment.

[3] There was a lower percentage of USCG personnel who refused or did not answer the item than the civilian population (0.04% vs. 0.98%), but this could be due to a difference in the measurement of refused or definitions of what characterize a complete or "usable" survey.

	Percent (SE)					
	2011 HRB*			2010 GSS**		
	Total age 18-65	Males age 18-65	Females age 18-65	Total age 18-65	Males age 18-65	Females age 18-65
Heterosexual or straight	96.50 (0.30)	97.75 (0.26)	88.58 (1.39)[b]	95.39 (0.55)	97.02 (0.60)	94.00 (0.88)[a]
Gay or Lesbian	1.25 (0.18)	0.62 (0.14)	5.25 (0.97)[b]	1.52 (0.30)	1.59 (0.45)	1.46 (0.44)[a]
Bisexual	1.08 (0.17)	0.62 (0.14)	3.97 (0.85)	1.65 (0.32)	0.59 (0.22)	2.57 (0.57)
Not at all sure/ Don't know	1.13 (0.17)	0.99 (0.17)	2.04 (0.62)	0.46 (0.18)	0.45 (0.24)	0.46 (0.26)
Refusals/Not answered	0.04 (0.03)[b]	0.03 (0.03)	0.16 (0.17)[b]	0.98 (0.28)[a]	0.35 (0.25)	1.51 (0.47)[a]

*For the purposes of comparison, respondents who identified as "Something else" on the 2011 HRB were not included in the analysis since there was no comparable category on the GSS survey. Data were not adjusted for sociodemographic differences between the civilian and military populations, though the civilian data were weighted to population and limited to 18-65 year olds.
**Data retrieved from General Social Survey web site. (September 4, 2013).
http://www3.norc.org/GSS+Website/Download/SPSS+Format/

Note: The 2010 GSS dataset classified some respondents as IAP/Inapplicable; these are respondents who were not asked to answer a specific question. For the purposes of this analysis, these respondents were set to missing.

6.3 Variables Associated with Sexual Orientation

Table 6.4 presents sexual orientation by several demographic variables of interest. For the purposes of the analyses that follow, USCG personnel who identified as "Gay or Lesbian" or "Bisexual" were combined into one group and compared to those who indicated they were "Heterosexual ('Straight')." Respondents who indicated "Something else" or "Not at all sure" were not included in the analyses because it was unclear how to categorize them; we did not want to assume that they identified as either heterosexual, or lesbian, gay, or bisexual. As such, we focus these analyses on those who identified as "Heterosexual" or "Lesbian, Gay, or Bisexual."

Non-Hispanic African American USCG personnel were more likely to identify as LGB compared to non-Hispanic White USCG personnel (5.2% vs. 2.1%). A larger percentage of USCG personnel who

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[4] Table displays the percentage of USCG personnel who indicated each of the sexual orientation categories listed in the 2011 HRB survey question 98. The standard error of each estimate is presented in parentheses. Some estimates round to 0.0% which meets criteria for suppression; because this is a first look at sexual orientation in the Coast Guard, we did not suppress these estimates. Significance tests were conducted between 2011 HRB and 2010 GSS estimates within each sexual orientation group for the total sample, males, and females. A superscripted alpha-character adjacent to an estimate indicates the estimate is significantly different from the estimate that appears within the same sexual orientation group for the total sample, males, and females:
   [a]Indicates estimate is significantly different from the 2011 HRB estimate within each sexual orientation group for the total, males, and females at the 95% confidence level after Bonferroni adjustment.
   [b]Indicates estimate is significantly different from the 2010 GSS estimate within each sexual orientation group for the total, males, and females at the 95% confidence level after Bonferroni adjustment.

were not married or who were married without their spouse present identified as LGB compared to those who were married with their spouse present (4.8% and 2.8%, respectively, vs. 0.9%). USCG personnel who did not have children living with them were more likely to identify as LGB compared to those who did have children living with them (3.4% vs. 1.0%). Finally, USCG personnel who were classified as having low religiosity/spirituality or who indicated that religiosity/spirituality was not applicable were more likely to identify as LGB compared to those classified as having high religiosity/spirituality (3.8% and 3.5%, respectively, vs. 0.8%) (see Table 6.4).

Table 6.4 – Sexual Orientation Among USCG Personnel by Demographic Variables [5]			
	Percent (SE)		
Characteristic	**Heterosexual**	**Lesbian, Gay, or Bisexual**	**SE**
Total	97.65	2.35	(0.25)
Platform			
Ashore	97.32	2.68	(0.31)
Afloat	98.49	1.51	(0.43)
Aviation	98.16	1.84	(0.71)
Pay Grade			
E1-E4	97.03	2.97	(0.49)
E5-E6	98.03	1.97	(0.37)
E7-E9	98.49	1.51	(0.58)
WO1-WO5	98.76	1.24	(0.94)
O1-O3	96.19	3.81	(1.01)
O4-O10	98.37	1.63	(0.81)
Age Group			
18-20	96.13	3.87	(2.22)
21-25	96.14	3.86	(0.70)
26-35	97.77	2.23	(0.37)
36-45	98.06	1.94	(0.50)
46-65	99.13	0.87	(0.70)

[5] Table displays the percentage of USCG personnel who identified as heterosexual and as lesbian, gay, or bisexual based on HRB survey question 98, by various demographic groups. The standard error of each estimate is presented in parentheses. Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Family Status rows in this table:
   [a]Indicates estimate is significantly different from the estimate in row #1 (Not married) at the 95% confidence level after Bonferroni adjustment.
   [b]Indicates estimate is significantly different from the estimate in row #2 (Married, spouse not present) at the 95% confidence level after Bonferroni adjustment.
   [c]Indicates estimate is significantly different from the estimate in row #3 (Married, spouse present) at the 95% confidence level after Bonferroni adjustment.

Race/Ethnicity

White, non-Hispanic	97.93	2.07	(0.26)	b
African American, non-Hispanic	94.85	5.15	(1.60)	a
Hispanic	96.85	3.15	(0.83)	
Other	97.33	2.67	(1.29)	

Education

High school or less	98.01	1.99	(0.49)	
Some college	97.82	2.18	(0.32)	
College graduate or higher	96.94	3.06	(0.56)	

Family Status

Not married	95.17	4.83	(0.60)	c
Married, spouse not present	97.18	2.82	(0.98)	c
Married, spouse present	99.13	0.87	(0.20)	a,b

Children Living With You

Yes	99.03	0.97	(0.24)	b
No	96.58	3.42	(0.39)	a

Religiosity/Spirituality

High	99.16	0.84	(0.30)	c,d
Medium	97.82	2.18	(0.41)	
Low	96.22	3.78	(0.81)	a
Not Applicable	96.50	3.50	(0.61)	a

Table 6.5 presents the prevalence rates of 21 health related behaviors by sexual orientation. Sexual orientation was a significant covariate of 6 of the 21 health related behaviors, with USCG personnel who identified as LGB having a higher prevalence rate of heavy alcohol use, serious consequences as a result of drinking, productivity loss as a result of drinking, prescription drug misuse, suicidal ideation or attempt, and a history of sexual abuse than those who identified as heterosexual. Figure 6.A presents the prevalence rates of these six variables by sexual orientation.

Figure 6.A: Outcomes Associated with Sexual Orientation[6]
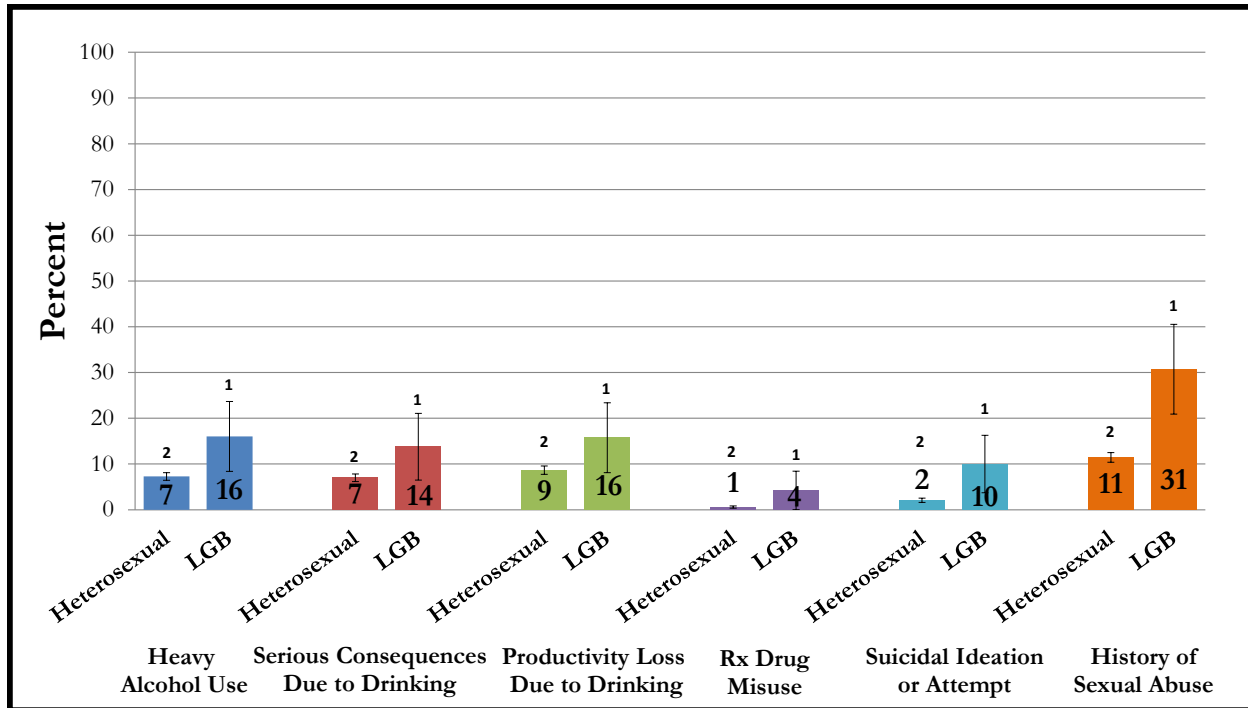
- USCG personnel who identified as lesbian, gay, or bisexual had a higher prevalence rate of heavy alcohol use (16% vs. 7%), serious consequences as a result of drinking (14% vs. 7%), productivity loss as a result of drinking (16% vs. 9%), prescription drug misuse (4% vs. 1%), suicidal ideation or attempt (10% vs. 2%), and a history of sexual abuse (31% vs. 11%) compared to USCG personnel who identified as heterosexual.

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[6] Significance tests were conducted between all bars/estimates within the same outcome of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group:

[1]Indicates estimate is significantly different from the estimate in bar #1 (Heterosexual) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in bar #2 (LGB) at the 95% confidence level after Bonferroni adjustment.

6.4 Interpretations and Recommendations

The vast majority of active duty USCG personnel identified as heterosexual or 'Straight' (95.8%); 2.3% identified as lesbian, gay, or bisexual (LGB), 0.7% identified as "Something else," and another 1.1% indicated they were "Not at all sure." Similarly, the majority of USCG personnel (92.5%) indicated they were only attracted to the opposite sex, with a larger percentage of males reporting as such than females. Overall, 1.0% of personnel indicated they were only attracted to the same sex and 0.5% indicated that they were mostly attracted to the same sex, with females being more likely to indicate this than males. A small percentage indicated they were attracted to both sexes equally.

Notably, sexual orientation was not a significant covariate for the majority of the health related behaviors studied; there were fewer differences between heterosexual and LGB USCG personnel on key behavioral and psychological health outcome measures than might have been expected given that the survey was conducted very shortly after the repeal of the "Don't Ask, Don't Tell (DADT)" policy in which openly gay service members could be discharged from the military. The repeal of the DADT policy went into effect in September 2011, and the survey was administered to USCG personnel between October 2011 and January 2012. In particular, no differences were found for high stress, high depression, possible posttraumatic stress, high anxiety, high anger, and high resilience. These results indicate that USCG personnel who identified as LGB and those who classify themselves as heterosexual report the same level of mental health issues, or lack thereof. In addition, there were no significant differences in high service commitment by sexual orientation, indicating that both groups are equally committed to their Service. Those who self-identified as LGB were not significantly different from those who self-identified as heterosexual on 15 of the 21 covariates examined.

Sexual orientation was a significant covariate of 6 of the 21 health related behaviors, with USCG personnel who identified as LGB having a higher prevalence rate of heavy alcohol use, serious consequences as a result of drinking, productivity loss as a result of drinking, prescription drug misuse, suicidal ideation or attempt, and a history of sexual abuse than those who identified as heterosexual. Future research should explore possible explanations for the differences in these health related behaviors by sexual orientation to develop recommendations to decrease the occurrence of these particular negative outcomes if, in fact, it holds true over time.

It is possible, given the timing of the survey in relation to the repeal of the DADT policy, that service members were apprehensive about identifying as LGB, which would affect the ability to detect differences in health related behaviors, as some LGB service members might be included in the heterosexual group. It is important to conduct follow-up research to ensure that all service members are receiving the care and support needed to maintain a diverse and healthy force.

CG-11 cautions from making any interpretations or recommendations from these findings as this is a "first look" at the LGB community in the USCG. Future research efforts are needed to determine whether the covariates measured (e.g., higher prevalence of heavy alcohol use, serious consequences and productivity loss as a result of drinking, prescription drug misuse, suicidal ideation or attempt, and history of sexual abuse) are, in fact, in need of intervention or prevention support. These early results are a starting point and a baseline for future research to more fully explore the heterogeneity within this diverse group of USCG members.

Table

The following table presents health related behaviors by sexual orientation in the USCG.

Table 6.5 – Health Related Behaviors – Prevalence Rates and Odds Ratios

Characteristic[a]	USCG				
	Prevalence		Odds Ratio[b]		
Total					
Heterosexual	97.65				
Lesbian, Gay, or Bisexual	2.35	(0.25)			
Current Drinker					
Heterosexual	89.92	(0.49)	1.00		
Lesbian, Gay, or Bisexual	95.28	(2.25)	2.26	(0.85, 6.04)	
Heavy Alcohol Use					
Heterosexual	7.28	(0.43) [2]	1.00		
Lesbian, Gay, or Bisexual	16.02	(3.90) [1]	2.43	(1.36, 4.33)	*
Hazardous or More Severe Alcohol Use					
Heterosexual	9.64	(0.49)	1.00		
Lesbian, Gay, or Bisexual	14.24	(3.74)	1.56	(0.85, 2.86)	
Serious Consequences as a Result of Drinking					
Heterosexual	7.00	(0.42) [2]	1.00		
Lesbian, Gay, or Bisexual	13.78	(3.72) [1]	2.12	(1.14, 3.96)	
Productivity Loss as a Result of Drinking					
Heterosexual	8.65	(0.47) [2]	1.00		
Lesbian, Gay, or Bisexual	15.76	(3.90) [1]	1.97	(1.10, 3.54)	*
Age of Onset for Alcohol Use (14 or Younger)					
Heterosexual	16.39	(0.63)	1.00		
Lesbian, Gay, or Bisexual	23.64	(4.63)	1.58	(0.98, 2.62)	
Current Smoker					
Heterosexual	19.38	(0.65)	1.00		
Lesbian, Gay, or Bisexual	22.02	(4.40)	1.17	(0.71, 1.95)	
Light/Moderate or Heavy Smoker					
Heterosexual	10.94	(0.51)	1.00		
Lesbian, Gay, or Bisexual	13.04	(3.58)	1.22	(0.65, 2.28)	
Current Smokeless Tobacco User					
Heterosexual	19.56	(0.65)	1.00		
Lesbian, Gay, or Bisexual	17.70	(4.06)	0.88	(0.51, 1.53)	

Table 6.5 – Health Related Behaviors – Prevalence Rates and Odds Ratios

Age of Onset for Tobacco Use (14 or Younger)

Heterosexual	15.15	(0.92)		1.00	
Lesbian, Gay, or Bisexual	21.97	(6.92)		1.58	(0.71, 3.48)

Prescription Drug Misuse

Heterosexual	0.59	(0.13)	[2]	1.00	
Lesbian, Gay, or Bisexual	4.23	(2.14)	[1]	7.40	(2.43, 22.48)	*

High Overall Stress

Heterosexual	36.69	(0.80)		1.00	
Lesbian, Gay, or Bisexual	35.21	(5.08)		0.94	(0.60, 1.45)

High Depression

Heterosexual	5.45	(0.38)		1.00	
Lesbian, Gay, or Bisexual	9.59	(3.17)		1.84	(0.89, 3.81)

Possible Posttraumatic Stress

Heterosexual	1.93	(0.23)		1.00	
Lesbian, Gay, or Bisexual	2.05	(1.52)		1.06	(0.24, 4.74)

High Anxiety

Heterosexual	11.33	(0.53)		1.00	
Lesbian, Gay, or Bisexual	16.96	(4.01)		1.60	(0.91, 2.81)

High Resilience

Heterosexual	35.33	(0.82)		1.00	
Lesbian, Gay, or Bisexual	26.41	(4.79)		0.66	(0.40, 1.07)

High Anger

Heterosexual	3.32	(0.31)		1.00	
Lesbian, Gay, or Bisexual	6.47	(2.66)		2.02	(0.84, 4.85)

Suicidal Ideation or Attempt

Heterosexual	2.09	(0.24)	[2]	1.00	
Lesbian, Gay, or Bisexual	10.00	(3.21)	[1]	5.20	(2.50, 10.82)	*

History of Physical Abuse

Heterosexual	11.64	(0.54)		1.00	
Lesbian, Gay, or Bisexual	15.43	(3.86)		1.38	(0.77, 2.49)

History of Sexual Abuse

Heterosexual	11.44	(0.54)	[2]	1.00	
Lesbian, Gay, or Bisexual	30.73	(5.01)	[1]	3.43	(2.15, 5.50)	*

Table 6.5 – Health Related Behaviors – Prevalence Rates and Odds Ratios				
High Service Commitment				
Heterosexual	27.33	(0.73)	1.00	
Lesbian, Gay, or Bisexual	21.27	(4.35)	0.72	(0.43, 1.20)

Note: Table displays the percentages and odds ratios of health related behaviors of USCG personnel, by sexual orientation. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same characteristic. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group:

[1]Indicates estimate is significantly different from the estimate in row #1 (Heterosexual) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (Lesbian, Gay, or Bisexual) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting health related behaviors and other characteristics of interest; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Sexual Orientation, Q98).

Chapter 7: Service Commitment

This chapter presents the results of a detailed analysis of service commitment. This chapter assesses service members' level of commitment and investigates factors related to their commitment levels. A table presenting results for this analysis is at the end of the chapter. A figure showing prevalence rates by platform and four variables that exhibit strong relationships with service commitment (i.e., strong odds ratio in comparison to the reference category) is also presented. The overall prevalence rate for high service commitment is also displayed as a red horizontal line within the figure.

Overview of Findings

7.1 Service Commitment

Respondents were asked three questions to assess their level of service commitment, including job satisfaction, likelihood to remain on active duty beyond their current enlistment term, and likelihood of staying on active duty for at least 20 years. The job satisfaction item was presented using a 4-point scale ranging from "Very dissatisfied" to "Very satisfied." The intent to stay items were presented using a 5-point scale ranging from "Very unlikely" to "Very likely." To create a scale of service commitment, the two items measuring likelihood to remain in the service were averaged together to create a single score; the intent to stay score and the job satisfaction item were then converted to comparable scales, averaged together, and multiplied by 100 to represent percentage of service commitment. These averages were then divided into four categories: 'Detached' (scores less than 20), 'Low' service commitment (scores between 20 and 40), 'Moderate' service commitment (scores between 51 and 85), and 'High' service commitment (scores greater than 85).

Among active duty USCG personnel, approximately 27% were classified as having high service commitment (see Table 7.1 and Table 7.2). Most (61.3%) had moderate service commitment.

Table 7.1 – Service Commitment Among USCG Personnel	
Level of Service Commitment	Percent (SE)
High	26.8 (0.7)
Moderate	61.3 (0.7)
Low	9.9 (0.4)
Detached	2.1 (0.2)

Figure 7.A presents the relationship between platform and service commitment, as well as four variables that have strong associations with high service commitment in the USCG: age group, depression, resilience, and posttraumatic stress (PTS).

Figure 7.A: Indicators Associated with High Service Commitment[1]
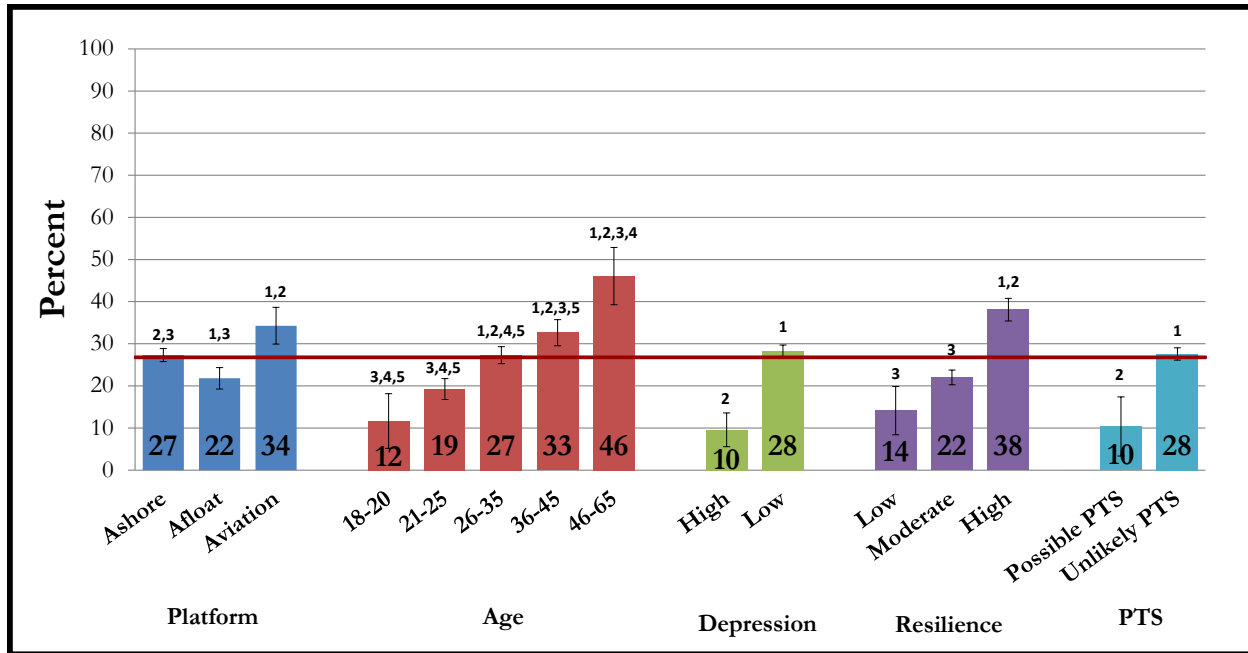
- USCG personnel who were stationed in an aviation setting had the highest prevalence rate of high service commitment compared to those stationed ashore or afloat (34% vs. 22%-27%).

- Age was associated with high service commitment, with personnel between 46 and 64 years old having the highest prevalence rate of high service commitment compared to those 45 years old or younger (i.e., 18-20, 21-25, 26-35, 36-45)(46% vs. 12%-33%). Personnel between 26 and 45 years old (i.e., 26-35, 36-45) also had higher prevalence rates of high service commitment compared to those who were between the ages of 18 and 25 years old (i.e., 18-20, 21-25) (27%-33% vs. 12%-19%).

- USCG personnel who were classified as having high depression had a lower prevalence rate of high service commitment than those who were classified as having low depression (10% vs. 28%).

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[1] Significance tests were conducted between all bars/estimates within the same characteristic of interest. A superscripted number above a bar indicates the estimate is significantly different from the estimate that appears in the bar # within the same group. For example, consider the platform bars in this figure:

[1]Indicates estimate is significantly different from the estimate in bar #1 (Ashore) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in bar #2 (Afloat) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in bar #3 (Aviation) at the 95% confidence level after Bonferroni adjustment.

- Service members classified as having high resilience had a higher prevalence rate of high service commitment compared to those classified as having low or moderate resilience (38% vs. 14%-22%).

- USCG personnel who were classified as having possible PTS had a lower prevalence rate of high service commitment than those who were classified as unlikely to have PTS (10% vs. 28%).

7.2 Interpretations and Recommendations

Among USCG personnel, the vast majority (88%) were classified as having moderate (61%) or high (27%) service commitment. The aviation community had the highest prevalence rate of high service commitment, followed by ashore and afloat personnel, respectively. Analyses also showed that age was a strong covariate of high service commitment. As may be expected, service commitment increased as age increased; the two youngest age cohorts (i.e., 18-20, 21-25) had the lowest prevalence rates of high service commitment compared to personnel who were between 26 and 65 years old. This may also be a function of the way service commitment was measured as older service members may be more likely to report a likelihood of remaining in the service for 20 years because they are already closer to achieving that goal. In addition, two psychological health factors were strong covariates of high service commitment. Specifically, those classified as having high depression and those classified as having possible PTS have lower prevalence rates of high service commitment than those classified as having low depression and those classified as unlikely to have PTS. In addition, Service members who had low or moderate resilience had lower prevalence rates of high service commitment than those who had high resilience. Efforts to increase service commitment may focus on service members who are younger; identifying and effectively treating psychological health issues, such as depression and PTS, may also increase service commitment.

The two youngest cohorts (i.e., 18-20, 21-25) had the lowest prevalence rates of high service commitment. However, given the strong relationship between age and years of service, it is likely that the difference in service commitment is due to career choices not having been made yet, and thus service commitment not yet being built by the younger age cohorts. CG-11 recommends that an excellent place to increase morale (hence service commitment) for the younger age cohorts would be the Chief's Mess, with the goal of supporting and mentoring younger members' military career choice and related service commitment. However, with the majority of USCG personnel rating their service commitment as "moderate" or "high," the USCG should remain proud considering the multi-mission and current economic realities facing the nation and the Armed Forces.

Table

The following table presents an in-depth analysis of service commitment in the USCG.

Table 7.2 – High Service Commitment

Characteristic[a]	USCG				
	Prevalence			Odds Ratio[b] (95% CI)	
Total	26.79	(0.65)			
Platform					
Ashore	27.30	(0.80)	[2,3]	0.68	(0.56, 0.84)	*
Afloat	21.80	(1.30)	[1,3]	0.57	(0.45, 0.73)	*
Aviation	34.28	(2.22)	[1,2]	1.00	
Gender					
Male	27.63	(0.71)	[2]	1.44	(1.20, 1.74)	*
Female	21.38	(1.65)	[1]	1.00	
Pay Grade					
E1-E4	18.59	(1.01)	[2,3,4,5,6]	0.33	(0.26, 0.41)	*
E5-E6	26.11	(1.06)	[1,3,4,6]	0.48	(0.39, 0.60)	*
E7-E9	33.63	(2.11)	[1,2]	0.76	(0.60, 0.98)	*
W01-W05	45.10	(3.77)	[1,2,5]	1.09	(0.79, 1.48)	
O1-O3	31.62	(2.29)	[1,4,6]	0.62	(0.47, 0.81)	*
O4-O10	43.18	(2.94)	[1,2,5]	1.00	
Age Group					
18-20	11.67	(3.31)	[3,4,5]	0.15	(0.08, 0.31)	*
21-25	19.25	(1.27)	[3,4,5]	0.28	(0.20, 0.38)	*
26-35	27.30	(1.03)	[1,2,4,5]	0.44	(0.33, 0.59)	*
36-45	32.62	(1.59)	[1,2,3,5]	0.57	(0.42, 0.77)	*
46-65	46.08	(3.47)	[1,2,3,4]	1.00	
Race/Ethnicity					
White, non-Hispanic	27.42	(0.75)		1.00	
African American, non-Hispanic	20.99	(2.68)		0.70	(0.51, 0.97)	*
Hispanic	26.30	(1.88)		0.94	(0.77, 1.16)	
Other	23.38	(2.95)		0.81	(0.58, 1.12)	
Education					
High school or less	24.24	(1.36)	[3]	0.65	(0.54, 0.79)	*
Some college	25.00	(0.87)	[3]	0.68	(0.58, 0.79)	*
College graduate or higher	33.03	(1.41)	[1,2]	1.00	

Table 7.2 – High Service Commitment

Family Status						
Not married	19.54	(0.99)	[2,3]	0.56	(0.48, 0.65)	*
Married, spouse not present	33.69	(2.57)	[1]	1.17	(0.92, 1.49)	
Married, spouse present	30.28	(0.89)	[1]	1.00		
Children Living With You						
Yes	31.57	(1.05)	[2]	1.00		
No	23.24	(0.82)	[1]	0.66	(0.58, 0.75)	*
Combat Deployed in Past Year						
Yes	24.46	(3.64)		0.86	(0.58, 1.28)	
No	27.30	(0.75)		1.00		
Average Hours of Nightly Sleep						
9+ hours	29.39	(4.05)		0.95	(0.64, 1.41)	
7-8 hours	30.42	(1.15)	[3]	1.00		
5-6 hours	22.90	(1.11)	[2]	0.68	(0.58, 0.80)	*
4 hours or less	20.72	(3.77)		0.60	(0.38, 0.95)	*
Overall Stress in Past 12 Months						
High	19.45	(1.06)	[2]	0.52	(0.45, 0.61)	*
Low	31.56	(0.96)	[1]	1.00		
History of Physical Abuse						
Yes	23.39	(2.02)		0.80	(0.63, 1.01)	
No	27.61	(0.79)		1.00		
History of Sexual Abuse						
Yes	24.71	(2.04)		0.86	(0.69, 1.09)	
No	27.52	(0.79)		1.00		
Risk-Taking						
High Risk Taking	24.35	(2.45)		0.84	(0.64, 1.10)	
Low-Moderate Risk Taking	27.71	(0.78)		1.00		
Religiosity/Spirituality						
High	31.24	(1.50)	[2,4]	1.00		
Medium	25.85	(1.21)	[1]	0.77	(0.64, 0.92)	*
Low	25.63	(1.84)		0.76	(0.60, 0.96)	*
Not Applicable	25.67	(1.42)	[1]	0.76	(0.62, 0.93)	*

Table 7.2 – High Service Commitment

Vigorous Physical Exercise, Past 30 Days

Yes	27.04	(0.70)		1.00		
No	26.48	(2.30)		0.97	(0.76, 1.24)	

Heavy Alcohol Use, Past 12 Months

Yes	22.22	(2.27)		0.77	(0.59, 1.00)	
No	27.12	(0.69)		1.00		

Current Smoker

Yes	22.75	(1.48)	[2]	0.76	(0.63, 0.91)	*
No	27.93	(0.79)	[1]	1.00		

Depression

High	9.57	(2.05)	[2]	0.27	(0.17, 0.43)	*
Low	28.22	(0.76)	[1]	1.00		

Anxiety

High	15.69	(1.76)	[2]	0.46	(0.35, 0.61)	*
Low	28.58	(0.79)	[1]	1.00		

Anger

High	12.02	(2.95)	[2]	0.35	(0.20, 0.61)	*
Low	27.89	(0.77)	[1]	1.00		

Resilience

Low resilience	14.13	(2.93)	[3]	0.27	(0.16, 0.43)	*
Moderate resilience	22.01	(0.89)	[3]	0.46	(0.39, 0.53)	*
High resilience	38.09	(1.38)	[1,2]	1.00		

Possible PTS

Possible PTS	10.37	(3.58)	[2]	0.30	(0.14, 0.65)	*
Unlikely PTS	27.56	(0.75)	[1]	1.00		

Suicidal Ideation Since Joining Military

Yes	24.09	(4.08)		0.85	(0.55, 1.32)	
No	27.23	(0.75)		1.00		

Self-Inflicted Injury - Lifetime

Yes	17.07	(2.17)	[2]	0.53	(0.39, 0.72)	*
No	28.09	(0.78)	[1]	1.00		

Table 7.2 – High Service Commitment

Positive Coping						
Yes	29.10	(0.93)	2	1.34	(1.15, 1.57)	*
No	23.44	(1.17)	1	1.00		
Avoidance Coping						
Yes	23.33	(1.19)	2	0.75	(0.64, 0.87)	*
No	28.98	(0.92)	1	1.00		
Social Network Facilitation - Alcohol						
Yes	26.88	(0.74)		0.86	(0.66, 1.13)	
No	29.93	(2.79)		1.00		
Social Network Facilitation - Cigarettes						
Yes	25.35	(0.83)	2	0.74	(0.63, 0.86)	*
No	31.58	(1.42)	1	1.00		
Social Network Facilitation - Smokeless						
Yes	25.59	(0.89)	2	0.81	(0.70, 0.94)	*
No	29.78	(1.21)	1	1.00		
Social Network Facilitation - RxDrugs						
Yes	19.41	(3.02)	2	0.64	(0.43, 0.94)	*
No	27.44	(0.74)	1	1.00		
Leadership Deterrence - Alcohol						
Yes	30.51	(1.06)	2	1.41	(1.22, 1.63)	*
No	23.73	(0.98)	1	1.00		
Leadership Deterrence - Cigarettes						
Yes	30.69	(0.98)	2	1.56	(1.35, 1.81)	*
No	22.09	(1.04)	1	1.00		
Leadership Deterrence - Smokeless						
Yes	30.38	(1.00)	2	1.47	(1.27, 1.71)	*
No	22.86	(1.02)	1	1.00		
Leadership Deterrence - RxDrugs						
Yes	27.57	(0.76)	2	1.39	(1.06, 1.84)	*
No	21.44	(2.30)	1	1.00		

Table 7.2 – High Service Commitment

Age of onset for alcohol use					
14 years old or younger	25.29	(1.71)		1.32	(0.91, 1.91)	
15 to 17 years old	26.57	(1.13)		1.41	(1.00, 1.99)	
18 to 20 years old	27.21	(1.40)		1.46	(1.02, 2.07)	*
21 years old or older	31.48	(1.90)	5	1.79	(1.24, 2.59)	*
I have never consumed any alcohol	20.43	(2.71)	4	1.00		
Age of onset for tobacco use					
14 years old or younger	28.42	(2.84)		1.07	(0.80, 1.42)	
15 to 17 years old	26.27	(1.75)		0.96	(0.78, 1.17)	
18 to 20 years old	26.71	(1.87)		0.98	(0.80, 1.21)	
21 years old or older	24.11	(3.01)		0.85	(0.61, 1.19)	
I have never smoked cigarettes	27.12	(0.91)		1.00		

Note: Table displays the percentages and odds ratios of USCG personnel, by sociodemographic and other characteristics of interest, who were classified as having high service commitment. The standard error and 95% confidence interval for each estimate is presented in parentheses.

[a]Significance tests were conducted between all rows within the same sociodemographic group. A superscripted number adjacent to an estimate indicates the estimate is significantly different from the estimate that appears in the row # within the same group. For example, consider the Race/Ethnicity rows in this table:

[1]Indicates estimate is significantly different from the estimate in row #1 (White, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[2]Indicates estimate is significantly different from the estimate in row #2 (African American, non-Hispanic) at the 95% confidence level after Bonferroni adjustment.
[3]Indicates estimate is significantly different from the estimate in row #3 (Hispanic) at the 95% confidence level after Bonferroni adjustment.
[4]Indicates estimate is significantly different from the estimate in row #4 (Other) at the 95% confidence level after Bonferroni adjustment.

[b]Odds ratios are from logistic regression analyses predicting high service commiemtn; the odds ratio of the reference group is equal to 1.00. 95% CI = 95% confidence interval of the odds ratio. An asterisk "*" beside an estimate indicates the estimate is significantly different from the reference group.

Source: 2011 Health Related Behaviors Survey of Active Duty Military Personnel (Level of Service Commitment, Q9, Q10, Q11).

Chapter 8: Conclusions and Next Steps

The 2013 State of the Behavioral Health (SoBH) report provides a comprehensive description of the health of the USCG. The SoBH used data from the 2011 Health Related Behaviors Survey (HRB) to assess USCG members' physical health, substance use and abuse, stress and psychological health, and military service commitment. In addition, a "first look" at the health of lesbian, gay, and bisexual (LGB) members of the USCG is also presented in this report. The major improvements to the HRB, including a survey mode change from paper to web; the use of a random, stratified sampling design to increase sample representativeness; and updated measurement and alignment of items with national civilian surveys, establishes a new baseline for future iterations and comparisons of the report based on best practices in survey research. These data provide a snapshot of a single moment in time describing population characteristics of USCG members.

There were three goals (research questions) that were posited before the analysis and writing of the report began. They were to :

a) Identify differences in the Health Related Behaviors of the Ashore, Afloat, and Aviation communities?

b) Identify differences between the heterosexual and lesbian, gay and bisexual communities?

c) Establish a new baseline by updating, modernizing and streamlining the questionnaire, delivery and methodology, as well as updating the science.

The USCG's Health, Safety & Work-Life Directorate (CG-11) examined the data from this report and provided conceptual, over-arching recommendations to guide USCG policies and health promotion goals related to the behavioral health of its members. At the conclusion of each substantive chapter, interpretations and recommendations were provided. In this chapter we integrate the recommendations that were made across all behavioral health topics to draw universal conclusions and recommend next steps based on the results of this report.

Platform Comparison: Afloat, Ashore, and Aviation

One of the underlying goals of this project was to identify differences and similarities between the "platforms" of the USCG; that is, the afloat, ashore, and aviation communities. We first conducted comparisons by platform for all of the outcome and covariate measures, with results presented for every health-related behavior studied. This allowed a first look to confirm or refute myths

concerning differences in physical and psychological health behaviors by platform. Significant differences by platform were identified for some of the health-related behaviors studied.

Afloat: The afloat population stood out as having the highest prevalence of many of the health-related behaviors studied compared to the ashore and aviation communities. The afloat community had the highest prevalence of heavy alcohol use; hazardous or more severe alcohol use; serious consequences as a result of drinking; work-related productivity loss as a result of drinking; current cigarette use; light/moderate and heavy cigarette use; smokeless tobacco use; high overall stress; and high anger. Compared to those stationed in an Air Station, the afloat community had a higher prevalence rate of being classified as having possible PTS and high anxiety, and a lower prevalence rate of high service commitment; there were no differences between the afloat and ashore communities for these measures.

Ashore: The ashore population had the highest prevalence of one substance use health-related behavior studied, prescription pain reliever use, compared to both the afloat and aviation communities. Compared to the afloat community, the ashore community had a higher prevalence rate of high cholesterol, prescription sedative use, and a history of sexual abuse. Compared to the aviation community, the ashore population had a higher prevalence rate of high anxiety and a history of physical abuse, and a lower prevalence rate of high service commitment.

Aviation: Those stationed at an Air Station did not have a higher prevalence rate of any of the health-related behaviors studied in this report in comparison to either the ashore or afloat communities. As summarized above, prevalence rates for the aviation community were lower than the ashore and afloat communities for many of these negative behaviors.

Overall findings revealed that the aviation community had the lowest prevalence rates for many of the adverse physical and mental health indicators while the afloat community had the highest prevalence rates among the three groups. Regardless of platform, the recommendations below should be considered USCG wide.

In general, the following recommendations encompass and seek to achieve the goals of Healthy People 2020 (serving as the framework for their presentation below), which focus on (a) improving quality of life by addressing preventable disease and injury; (b) eliminating health disparities across all groups; (c) addressing the role of environment in health behaviors; and (d) promoting a healthy lifestyle across all phases of the life span.[1]

Address Preventable Disease and Injury

➢ Metabolic syndrome, characterized by obesity, hypertension, hyperlipidemia, and impaired glucose regulation, is a major concern related to increased risk for cardiovascular disease. This syndrome is preventable in the vast majority of cases and directly related to lifestyle choices: diet, exercise, and stress. Efforts should be increased to address lifestyle changes which can prevent this syndrome through dietary education, fitness activities and standards, and stress management training.

➢ Behavioral components of overweight and obesity are continually dismissed, with attention focused on weight loss medications, supplanting lifestyle changes and behavioral therapies. Renewed efforts to adopt behavioral health strategies in the prevention and treatment of overweight and obesity are warranted to reduce the prevalence of this condition and maintain military readiness while also preserving individual wellness.

➢ Providing the "universal prevention" education *Strong Choices* to USCG members, particularly in the afloat community which had higher rates of alcohol use and abuse, and instructed by Substance Abuse Prevention Specialists or Command Drug and Alcohol Representatives should be adopted service-wide.

➢ Recently established fleet-wide alcohol consumption policies that promote responsible drinking and the "0, 1, 2, 3" principle (promulgated in USCG Health Promotion Manual, COMDTINST M6200.1B) should receive the widest dissemination with adoption by leaders at all levels of the USCG. These policies are the hallmark of healthy and responsible use of alcohol that should be learned, modeled, and advocated by every member as the keystone of a service-wide cultural shift.

➢ Continued representation on the DoD Addictive Substance Misuse Advisory Council is absolutely necessary for maintaining partnerships with the other military services and benefitting from the wealth of professional knowledge and expertise of its members in this arena.

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[1] Department of Health and Human Services. (2010). *Healthy People 2020.* Retrieved September 2013, from http://healthypeople.gov.

Eliminate Health Disparities

➤ Although males and senior enlisted USCG members had higher prevalence rates of obesity, high blood pressure, and high cholesterol than female members and other pay grade groups, the interventions to address these findings can be applied service-wide to benefit all members irrespective of age or gender. Educational interventions addressing healthy lifestyle (e.g., sleep hygiene, nutrition, fitness) choices and decision making should be provided annually across the Service.

➤ Sexual assault victims are subject to healthcare disparities due to the stigma and fear of retribution that accompanies reporting. Continued rigor is essential to cultivate a climate of victim support and education of all members to develop a culture of intolerance for sexual disrespect, discrimination and assault.

➤ Sexual orientation was not a significant covariate for the majority of the health related behaviors studied, although there were a few differences between heterosexual and LGB USCG personnel on key behavioral and psychological health outcome measures. Conducting follow-up research to ensure that all service members are receiving the care and support needed to maintain a diverse and healthy force will be critical in coming years.

Address the Role of Environment in Health Behaviors

➤ Results indicated that social environment, such as the behavior of peers, influences service members' own behaviors, particularly around the use of alcohol, tobacco, and prescription drugs. The recommendations of Substance Abuse Work Group I and II to enhance positive cultural change should be rapidly adopted to begin shifting the culture/climate within the Service and would likely enhance efforts to prevent sexual assault in the process.

➤ Leadership should enact measures to make smoking inaccessible at USCG installations and focus efforts to reduce smoking within the afloat community. A pilot program wherein one cutter from each coast becomes smoke-free and receives incentives for remaining smoke-free would be both instructive for expanded efforts in the future and inspirational to the rest of the afloat community and the remaining USCG platforms.

➤ Designating certain installations as smoke-free would focus tobacco cessation efforts at shore-based units. For those personnel who are nicotine dependent (irrespective of platform), nicotine replacement therapy should remain accessible and available at no cost to the member to promote cessation efforts.

➤ Enhance current efforts with the Addictive Substance Misuse Advisory Committee for Tobacco and bolster nicotine use policy to encourage commanding officers to establish a

tobacco-free campus. In addition, supporting "C" school policy that there will be no smoking during class hours for both students and instructors is both supported and encouraged.

Promote Healthy Lifestyle across All Phases of the Life Span

Younger personnel in the 21 to 25 year old cohort had the highest prevalence of serious consequences due to drinking compared to older service members. This highlights the importance of prevention education on the consequences of alcohol use for young drinkers.

- ➢ All health care providers should receive additional training to increase awareness of the symptom constellations of depression, anxiety, and PTS and to heighten suspicion for a co-occurring condition signified by the warning signs of minor self-inflicted injury and alcohol misuse.

- ➢ Leverage the inherent value of the senior enlisted associations (i.e., Chiefs' Mess for sea Services) to support and mentor younger members in their military career choice and related service commitment. Senior enlisted members and officers should be aware that the youngest members: a) report the highest incidence of depression; b) sleep the least; and c) are most prone to alcohol abuse and therefore are the members who are most at risk and most need additional mentoring and support. A curriculum review and revision to incorporate these elements of leadership awareness in appropriate training venues will inculcate a culture of healthy behavior and choices.

- ➢ USCG should undertake the task of assessing and identifying those characteristics of the aviation platform that contribute to the highest prevalence of high service commitment to develop strategies for increasing commitment among the other platforms.

The state of the behavioral health of the USCG appears to be strong. Members are reporting high amounts of resilience and commitment to their service. Overall, a majority of USCG personnel are engaging in healthy behaviors and are strongly committed to military service. The components most in need of improvement and further exploration include: substance use, particularly alcohol and tobacco use, and the co-occurrence of substance abuse and psychological illness. The findings presented in this report can provide a useful framework for understanding the mission readiness of active duty USCG personnel in regards to both long-standing and emerging behavioral health concerns to best inform policies and programs for military members and their families.

Appendix A: Key Definitions and Measures

This document describes how variables and values were recoded or transformed for the purpose of clearly defining the variables and combination of variables that appear in the 2013 State of the Behavioral Health (SoBH) of the United States Coast Guard report. This document acts as a guide to understanding how the raw data provided by service members was translated into the final report. The measures are grouped into the following sections: sociodemographic characteristics, physical health, substance use (alcohol, tobacco, prescription drugs), culture of substance use, stress and psychological health, sexual orientation and attraction, and service commitment. Each section includes definitions, original survey item numbers, and response options.

I.   Sociodemographic Characteristics

Platform: Platform was based on the respondents' duty location.

> **Source:**   Q2B
>
> **Responses:**   Shore duty
>   Sea duty
>   Air duty

Gender: Gender was defined as the respondents' biological sex.

> **Source:**   Q4
>
> **Responses:**   Male
>   Female

Pay Grade: This variable refers to the military pay grade of an individual respondent. Responses to the pay grade question were grouped to protect the anonymity of those who were included in services and grades with fewer individuals. The survey also included a response option for "Officer Trainee." Due to the small number of survey respondents within this group, officer trainees were combined with the E5-E6 pay grade group.

> **Source:**   Q3
>
> **Responses:**   E1-E4
>   E5-E6
>   E7-E9
>   W1-W5
>   O1-O3
>   O4-O10

Age: Respondents were prompted to enter their age using an open-format numeric response box. The individual age responses were categorized into 5 age groups and presented in this format for the majority of the tables in the report.

Source:	Q15
Responses:	18-20
	21-25
	26-35
	36-45
	46-65

Race/Ethnicity: Race/ethnicity comprises two separate items, similar to the format used by the United States Census. Respondents first indicated Hispanic or Latino ancestry on Q13 using the response options "Yes" or "No." The next item, Q14, inquired about racial background, with respondents given the option to select up to 5 racial categories, as applicable: "American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or other Pacific Islander," and "White." The responses on Q13 and Q14 were collapsed into 4 categories, with Hispanic ethnicity overriding racial categories. Individuals who selected multiple racial backgrounds or a racial/ethnic category other than White, African American, or Hispanic were categorized as "Other" race/ethnicity.

Source:	Q13, Q14
Responses:	White, non-Hispanic
	African American, non-Hispanic
	Hispanic
	Other

Education: Respondents reported their highest level of education using a 9-category response format, which ranged from "I did not graduate from high school" to "Graduate or professional degree." For the purposes of the analysis, the response choices were collapsed into 3 categories. The bottom 3 response choices, "I did not graduate from high school," "GED or ABE certificate," and "High school diploma" were grouped into 'High school or less.' The next 3 choices, "Trade or technical school graduate," "Some college but not a 2- or 4-year degree," and "2-year college degree" were grouped into 'Some college.' The top 3 response choices, "4-year college degree," "Graduate or professional study but no graduate degree," and "Graduate or professional degree" were grouped into 'College graduate or higher.'

Source:	Q12
Responses:	High school or less
	Some college
	College graduate or higher

Family Status: Family status for this report was measured by two items: 1) "Are you currently married?" and 2) "Is your spouse or significant other now living with you at your present duty

location?" Responses to these items were collapsed into a single variable to represent family status.

Source: Q18, Q19

Responses: Not married
Married, spouse not present
Married, spouse present

Children Living With You: Respondents were asked whether they had any children under age 18 living with them at their current duty station.

Source: Q25

Responses: Yes
No

Combat Deployed, Past 12 Months: Respondents were asked about the duration of combat zone deployments in the past year. Combat zone deployment was defined as "deployment where you received imminent danger pay (IDP), hazardous duty pay, and/or combat zone tax exclusion benefits." Response choices were provided on an 8-point scale, ranging from "Not at all in the past 12 months" to "11 or 12 months." Response options were dichotomized to reflect whether or not a combat zone deployment had occurred in the past year.

Source: Q161

Responses: Yes, combat deployed in past 12 months
No

II. Physical Health

Body Mass Index (BMI): The BMI is a measure of body mass to detect possible weight problems in male and female adults age 20 and older (Centers for Disease Control and Prevention; CDC, 2011). Respondents were asked two open-ended items to calculate BMI: 1) height in feet and inches, and 2) weight in pounds. The formula to calculate BMI is to divide weight in pounds by height in inches squared, and then multiply by the conversion factor of 703:

$$(\text{Weight in Pounds}/\text{Height in Inches}^2)*703$$

For those 20 years of age or older, the calculated BMI score was then divided into 4 weight categories: Underweight (BMI<18.5), Healthy weight (18.5≤BMI<25.0), Overweight (25.0≤BMI<30.0), and Obese (BMI≥30.0).

The criteria used to interpret BMI for individuals under 20 years old differs from the criteria for adults. This is due to changes in the amount of body fat with age and differences in the amount of body fat between males and females. For individuals under age 20, age and gender were included in the assignment of individuals to the four weight categories.

The table below summarizes the weight category criteria for 18 and 19 year olds.

	Underweight	Healthy Weight	Overweight	Obese
18 year old males	BMI<18.24	18.24≤BMI<25.66	25.66≤BMI<28.96	BMI≥28.96
18 year old females	BMI<17.55	17.55≤BMI<25.68	25.68≤BMI<30.33	BMI≥30.33
19 year old males	BMI<18.73	18.73≤BMI<26.36	26.36≤BMI<29.73	BMI≥29.73
19 year old females	BMI<17.77	17.77≤BMI<26.10	26.10≤BMI<31.03	BMI≥31.03

Source: Q4, Q15, Q16, Q17

Responses: Underweight
Healthy weight
Overweight
Obese

Moderate Physical Activity, Past 30 Days: Respondents were asked two items about the frequency and duration of moderate physical activity in the past month. Moderate physical activity was defined as "exertion that raises heart rate and breathing, but you should be able to carry on a conversation comfortably during the activity." Response options for frequency of moderate physical activity were provided on a 6-point scale, ranging from "Not at all in the past 30 days" to "About every day." Response options for the length of time engaged in moderate physical activity in the past month were provided on a 5-point scale, ranging from "Never in the past month" to "60 or more minutes." The frequency and duration items were combined by using the midpoint of each response option to form 3 response categories based on *Healthy People 2020* Objectives: "Less than 150 minutes per week," "150 minutes or more per week," and "300 minutes or more per week." Response options were dichotomized to reflect whether or not the respondent had engaged in moderate physical activity in the past 30 days.

Source: Q23A, Q24A

Responses: Yes
No

Vigorous Physical Activity, Past 30 Days: Respondents were asked two items about frequency and duration of vigorous physical activity in the past month. Vigorous physical activity was defined as "exertion that is high enough that you would find it difficult to carry on a conversation during the activity." Response options for frequency of vigorous physical activity were provided on a 6-point scale, ranging from "Not at all in the past 30 days" to "About every day." Response options for length of time engaged in vigorous physical activity in the past month were provided on a 5-point scale, ranging from "Never in the past month" to "60 or more minutes." The frequency and duration items were combined by using the midpoint of each response choice to form 3 response categories based on *Healthy People 2020* Objectives: "Less than 75 minutes per week," "75 minutes or

more per week," and "150 minutes or more per week." Response options were dichotomized to reflect whether or not the respondent had engaged in vigorous physical activity in the past 30 days.

Source: Q23B, Q24B

Responses: Yes
No

High Blood Pressure in Past 2 Years: Respondents were asked whether a doctor or other health care professional had provided a diagnosis of high blood pressure within specified timeframes: "Yes, within the past 2 years," "Yes, more than 2 years ago," and "No." Responses were dichotomized to indicate those who had been diagnosed within the past 2 years and those who had not received a diagnosis of high blood pressure within the past 2 years.

Source: Q26A

Responses: Yes, within the past 2 years
No

High Cholesterol in Past 2 Years: Respondents were asked whether a doctor or other health care professional had provided a diagnosis of high cholesterol within specified timeframes: "Yes, within the past 2 years," "Yes, more than 2 years ago," and "No." Responses were dichotomized to indicate those who had been diagnosed within the past 2 years and those who had not received a diagnosis of high cholesterol within the past 2 years.

Source: Q26C

Responses: Yes, within the past 2 years
No

Average Hours of Nightly Sleep, Past 7 Days: Respondents were asked two open-ended items about the average number of hours and minutes of sleep per 24 hour period in the past week: "In the past week (7 days), about how many hours on average did you sleep each 24 hour period?" The items were adapted from the 2010 National Health Interview Survey (NHIS; Centers for Disease Control and Prevention; CDC, 2010). Responses were coded as "4 hours or less," "5 or 6 hours," "7 or 8 hours," and "9 hours or more."

Source: Q141

Responses: 4 hours or less
5 or 6 hours
7 or 8 hours
9 hours or more

III. Substance Use – Alcohol

Drinking Level Classifications: The coding for drinking level classifications was based on the definitions established in the 2010 National Health Interview Survey (NHIS) using Q38, Q39, and Q40, as well as gender (Q4). For those who were missing data on Q39 and Q40, Q46 and Q47 were used to calculate frequency and quantity of alcohol consumption in the past year. The midpoints of each response option were used as a proxy for average number of days drinking and average number of drinks per week in the past year. An 'Abstainer' was defined as having less than 12 alcoholic drinks in their entire lifetime. A 'Former Drinker' was defined as having at least 12 drinks in their lifetime and reported 0 days of drinking in the past 12 months. A 'Current Drinker' was defined as having at least 12 drinks in their lifetime and reported 1 or more days of drinking in the past 12 months. Current drinkers were categorized into three levels of drinking intensity. An 'Infrequent/Light Drinker' was defined as having less than 4 drinks per week in the past year. A 'Moderate Drinker' was defined as having 4 to 14 drinks per week for males, and 4 to 7 drinks per week for females in the past year. A 'Heavy Drinker' was defined as having more than 14 drinks per week for males, and more than 7 drinks per week for females in the past year.

Source:	Q4, Q38, Q39, Q40, Q46, Q47
Responses:	Abstainer
	Former Drinker
	Current Drinker
	Infrequent/Light Drinker
	Moderate Drinker
	Heavy Drinker

Largest Number of Drinks, Past 30 Days: Respondents were asked to report the largest number of drinks that they had on any one occasion in the past 30 days. Respondents entered the number in an open response box and a mean score was calculated to determine the average number of drinks consumed on a single occasion in the past month.

Source:	Q50
Responses:	Range 0 – 99

Number of Drinks to Feel Drunk, Past 12 Months: Respondents who indicated that they drank enough alcohol to feel drunk at least "once or twice in the past 12 months" for Q42 were asked a follow-up question about the number of drinks it typically takes to feel drunk. Respondents entered the typical number of drinks to feel drunk in an open format response box. A mean score was calculated to determine the average number of drinks to feel drunk in the past year.

Source:	Q42, Q42A
Responses:	Range 0 – 20

AUDIT Scale Categories: The AUDIT (Alcohol Use Disorders Identification Test) scale sum score was calculated to determine the potential for alcohol dependence, with scores ranging from 0

to 40. The scale uses 10 items, which were recoded based on the AUDIT scale scoring guide developed by the World Health Organization (WHO). The AUDIT scale score was split into 4 categories to classify the risk levels of drinking, as presented below. The categories and cut-scores corresponding to each category were based on scoring guidelines developed by the WHO.

Source:	Q46, Q47, Q48A, Q48B, Q48C, Q48D, Q48E, Q48F, Q49A, Q49B
Responses:	Low Risk (AUDIT score < 8) Hazardous Drinking (AUDIT score 8-15) Harmful Drinking (AUDIT score 16-19) Possible Alcohol Dependence (AUDIT score of 20+)

Serious Consequences Related to Alcohol Use, Past 12 Months: Respondents were asked 15 items about the frequency of serious consequences associated with alcohol use in the past 12 months. Response options were on a 4-point scale, ranging from "0 times" to "3 or more times." Response options were first recoded into a dichotomous variable to represent whether a serious consequence had occurred or had not occurred in the past 12 months. The 15 items were then summed and recoded into a dichotomous variable for at least 1 event that occurred 1 or more times in the past 12 months.

Source:	Q43A, Q43B, Q43D, Q43E, Q43I, Q43J, Q43K, Q43L, Q43M, Q44C, Q44F, Q44G, Q44H, Q44J, Q44K
Response 1:	Yes, 1 or more items at least once in the past 12 months No

Work-Related Productivity Loss, Past 12 Months: Respondents were asked 11 items about the frequency of alcohol-related work productivity loss in the past 12 months. Response options for Q43 and Q44 were on a 4-point scale, ranging from "0 times" to "3 or more times." Response options for Q45 were on a slightly different 4-point scale, ranging from "0 work days" to "3 or more work days." Response options were first recoded into a dichotomous variable to represent whether alcohol-related work productivity loss had occurred or had not occurred at least once in the past 12 months. The 11 items were then summed and recoded into a dichotomous variable for at least 1 event that occurred 1 or more times in the past 12 months.

Source:	Q43C, Q43F, Q43G, Q43H, Q44I, Q45A, Q45B, Q45C, Q45D, Q45E, Q45F
Response 1:	Yes, 1 or more items at least once in the past 12 months No

Risk Behaviors Related to Alcohol Use, Past 12 Months: Respondents were asked 4 items about the frequency of alcohol-related risk behaviors in the past 12 months. Response options were on a 4-point scale, ranging from "0 times" to "3 or more times." Response options were first recoded into a dichotomous variable to represent whether a risk behavior had occurred or had not occurred in the past 12 months. The 4 items were then summed and recoded into a dichotomous variable for at least 1 event that occurred 1 or more times in the past 12 months.

Response 1:   Yes, 1 or more items at least once in the past 12 months
                  No

Alcohol Binge Episode, Past 30 Days: Respondents were asked to report the frequency of
having 5 or more drinks of beer, wine, or liquor on the same occasion for males, and 4 or more
drinks on the same occasion for females, within the past 30 days. Response choices were provided
on a 7-point scale, ranging from "Not at all in the past 30 days" to "About every day." The question
was recoded as a dichotomous variable for analysis to reflect those who had binged in the past
month.

Source: Q51

Responses: Yes, binged at least once in past 30 days
                 No

Age of Onset for Alcohol Use: Respondents were asked to report age at first alcohol use by
responding to categorical options that ranged from "14 years old or younger" to "21 years old or
older," with additional options on the survey to distinguish those who never consumed alcohol in
their lifetime.

Source: Q59

Responses: 14 years old or younger
                 15 to 17 years old
                 18 to 20 years old
                 21 years old or older
                 I never have consumed any alcohol

IV. Substance Use – Tobacco

Current Cigarette Smokers: Respondents were asked two items to determine current cigarette
smoking status based on the definition established in the 2010 National Health Interview Survey
(NHIS). If the respondent smoked at least 100 cigarettes in their lifetime and indicated smoking
cigarettes now (i.e., currently) "Every day" or "Some days," the respondent was considered a current
cigarette smoker.

Source: Q61, Q64

Responses: Yes, current cigarette smoker
                 No

Cigarette Smoking Classification Levels: The coding for cigarette smoking classification levels
was based on the definitions established in the 2010 National Health Interview Survey (NHIS). An
'Abstainer' was defined as smoking less than 100 cigarettes in their lifetime. A 'Former' smoker was
defined as smoking at least 100 cigarettes in their lifetime, but did not currently smoke cigarettes

now. A current smoker was defined by the criteria described above for "current cigarette smoker," and then split into three categories of smoking intensity. An 'Infrequent' smoker reported smoking cigarettes "Some days." A 'Light/Moderate' smoker reported smoking cigarettes "Every day" and on average, currently smoked less than 20 cigarettes (less than one pack) per day. A 'Heavy' smoker reported smoking "Every day" and currently smoked 20 or more cigarettes per day (1 pack or more) on average.

Source:	Q61, Q64, Q66
Responses:	Abstainer
	Former Smoker
	Infrequent Smoker
	Light/Moderate Smoker
	Heavy Smoker

Cigarette Smoking Cessation and Reduction Attempts, Past 12 Months: Current cigarette smokers were asked two items to gauge the number of times they had tried to 1) quit smoking cigarettes; and 2) reduce or cut back on the number of cigarettes smoked, for at least 30 consecutive days during the past 12 months. Responses were provided on a 5-point scale, ranging from "Never" to "6 or more times." The response categories "1 time," "2 to 3 times," "4 to 5 times," and "6 or more times" were combined to indicate at least one attempt to quit or reduce smoking in the past year.

Source:	Q68, Q69
Responses:	Never
	1 or more times

Smokeless Tobacco Use, Past 12 Months: Respondents were asked two questions to determine smokeless tobacco use in the past 12 months. First, respondents were asked to indicate "Yes" or "No" as to whether they had ever used chewing tobacco, snuff, or any other form of smokeless tobacco. Those who indicated "Yes" were then asked how often they had used smokeless tobacco in the past 12 months on 7-point scale, ranging from "Less than once a month" to "About every day." Response choices were combined to represent smokeless tobacco use in the past 12 months. The response, "I have not used chewing tobacco, snuff, or other smokeless tobacco in the past 12 months" was combined with those who had previously indicated for Q72 they had never used any kind of smokeless tobacco to represent no smokeless tobacco use.

Source:	Q72, Q73
Responses:	Yes, used in past 12 months
	No

Age of Onset for Cigarette Use: Respondents were asked to report age of initiation for smoking cigarettes, and were provided with four categorical options that ranged from "14 years old or younger" to "21 years old or older" and a fifth option to indicate they had never smoked cigarettes.

Source:	Q62

Responses: 14 years old or younger
15 to 17 years old
18 to 20 years old
21 years old or older
I have never smoked cigarettes

V.   Substance Use – Prescription Drugs

Any Prescription Drug Use: Prescription drugs are controlled substances that can be legally obtained and possessed with a health care professional's authorization (i.e., prescription). The items measuring prescription drug use and misuse were derived from the 2010 National Survey on Drug Use and Health (NSDUH). The first question asked if the respondent had ever used any of the prescription drugs, which included stimulants, sedatives, pain relievers, and anabolic steroids. Response options were "Never Used," "Used at least once in my life," and "Used at least once in the past 12 months." Those who indicated use at least once in the past 12 months were classified as "Past 12 Month" users.

Source: Q84

Responses: Lifetime
Past 12 Months

Prescription Stimulant Use: Respondents were asked whether they had ever used stimulants. Response options were "Never Used," "Used at least once in my life," and "Used at least once in the past 12 months." Those who indicated use at least once in the past 12 months were classified as "Past 12 Month" users.

Source: Q84A

Responses: Lifetime
Past 12 Months

Prescription Sedative Use: Respondents were asked whether they had ever used sedatives. Response options were "Never Used," "Used at least once in my life," and "Used at least once in the past 12 months." Those who indicated use at least once in the past 12 months were classified as "Past 12 Month" users.

Source: Q84B

Responses: Lifetime
Past 12 Months

Prescription Pain Reliever Use: Respondents were asked whether they had ever used prescription pain relievers. Response options were "Never Used," "Used at least once in my life," and "Used at least once in the past 12 months." Those who indicated use at least once in the past 12 months were classified as "Past 12 Month" users.

Source: Q84C

Responses: Lifetime
            Past 12 Months

Prescription Anabolic Steroids Use: Respondents were asked whether they had ever used anabolic steroids. Response options were "Never Used," "Used at least once in my life," and "Used at least once in the past 12 months." Those who indicated use at least once in the past 12 months were classified as "Past 12 Month" users.

Source: Q84D

Responses: Lifetime
            Past 12 Months

Any Prescription Drug Misuse, Past 12 Months: To measure misuse of prescription drugs, respondents were asked a series of questions pertaining to the prescription target, the amount used, and the motivation for use. Each of these questions was asked in the timeframe of the past year, therefore all presentation of prescription drug misuse is based on the past 12 months. For the purpose of this study, prescription drug misuse was categorized as (1) a response to Q86B of "prescribed for someone else and I used in the past year" or "obtained prescription medication another way and I used in the past year;" OR (2) a response to Q87 of "Used a greater amount than prescribed;" OR (3) a response to Q89 of "To feel good (get high or buzzed, etc.)."

Source: Q84, Q86B, Q87, Q89

Responses: Yes, misused prescription drugs in the past 12 months
            No

VI. Culture of Substance Use

Social Network Facilitation of Substance Use: Respondents were asked about friends' use of cigarettes, smokeless tobacco, alcohol, and prescription drug misuse: "In your off-duty hours, how many of your friends do the following when you are around them: a) Smoke cigarettes, b) Use chewing/smokeless tobacco, c) Drink alcohol, and d) Misuse prescription drugs?" Response options were "None," "Some," and "Most." The top two response options ("Some" and "Most") were combined to indicate any social network facilitation of each of the substances.

Source: Q100A – Q100C, Q100E

Responses: Yes
            No

Leadership Deterrence of Substance Use: Respondents were asked two items about installation and supervisor deterrence of the use of cigarettes, smokeless tobacco, alcohol, and prescription drug misuse. The first item asked about installation deterrence of substance use: "Thinking about the

installation at which you are currently stationed (such as your post, camp, base, station, ship and support facilities, or other geographic duty location), how strongly does it discourage the use of the following…" and the second item asked about supervisor deterrence of substance use: "Thinking about your immediate supervisor(s) at the installation where you are currently stationed, how strongly does he/she discourage the use of the following: a) Cigarettes, b) Chewing/smokeless tobacco, c) Alcohol, and d) Prescription drug misuse?" Response options for both items were "Not at all," "Somewhat," and "Strongly." The two items measuring installation and supervisor deterrence of substance use were added together for each of the substances. Those with scores of 4 or higher were coded as "1" to reflect high leadership deterrence of use for each of the substances. Those with scores less than 4 were coded as "0" to reflect low leadership deterrence of substance use.

Source: Q101A – Q101C, Q101E, Q102A – Q102C, Q102E

Responses: Yes
             No

VII.   Stress and Psychological Health

Resilience Level: Respondents were asked 6 items about resilience – 3 related to confidence in overcoming challenges and 3 related to enjoyment of challenges. Resilience confidence items included "I am very optimistic" and "I can bounce back from adversity easily." Resilience enjoyment included "I like overcoming challenges" and "I can easily control what happens in my life." Responses were provided on a 5-point scale, ranging from "Not at all" to "A great deal." Responses to these 6 items were recoded (i.e., "A great deal" was assigned a value of 1, "A lot" was assigned a value of .75, "Somewhat" was assigned a value of .5, "A little" was assigned a value of .25, and "Not at all" was assigned a value 0), and averages were calculated separately for both resilience confidence and resilience enjoyment. Theses scores were then averaged, and resilience level was trichotomized. Participants with an average score of .25 or less were categorized as 'Low' resilience, those with a score between .25 and .75 were categorized as 'Moderate' resilience, and those with an average score of .75 or higher were classified as 'High' resilience.

Source: Q139A, Q139B, Q139J, Q168A, Q168C, Q168I

Responses: Low resilience
             Moderate resilience
             High resilience

High Overall Stress Level, Past 12 Months: Respondents were asked two items to measure level of overall stress in the past 12 months. The first question asked participants to indicate how often they experienced a lot of stress in the past 12 months. Responses were provided on a 5-point scale, ranging from "Never" to "Always." The second question asked participants to indicate how much military-related stress they experienced overall in the past 12 months. Responses were provided on a 4-point scale, ranging from "None at all" to "A lot." Average scores were calculated for each item separately; these scores were then averaged together. Overall stress level was then dichotomized based on a cutoff value. Those participants with an average score of .70 or greater were classified and presented in the tables as "High overall stress," whereas those with an average score of less than .70 were classified as "Low overall stress."

Responses: High overall stress level
            Low overall stress level

High Depression Level, Past Week: Respondents were asked two items to assess level of depressive symptoms in the past week; these items were "I felt depressed" and "I felt sad." Response options were provided on a 5-point scale, ranging from "Never" to "5-7 days." To create a depression level scale, the responses were recoded (i.e., "5-7 days" was assigned a value of 1, "3-4 days" was assigned a value of .75, "1-2 days" was assigned a value of .5, "Less than 1 day" was assigned a value of .25, and "never" was assigned a value 0) and averaged. Depression level was then dichotomized based on a cutoff value. Those with an average score of .75 or greater were classified and presented in the tables as "High depression," whereas those with an average score of less than .75 were classified as "Low depression."

            Source: Q125C, Q125E

            Responses: High depression level
                        Low depression level

High Posttraumatic Stress (PTS) Level, Past 30 Days: Respondents were asked 4 items to determine the extent to which they experienced symptoms in the past 30 days that indicated need for further PTS evaluation (Blanchard et al., 1996). Participants were asked how much they had been bothered by each of the 4 symptoms in the past month, including "feeling very upset when something reminded you of a stressful experience," "feeling emotionally numb or being unable to have loving feelings for those close to you," "having difficulty concentrating," and "feeling jumpy or easily startled." Responses were provided on a 5-point scale, ranging from "Not at all" to "Extremely." To create this scale, an average was calculated from participants' responses on each of the 4 items. A dichotomous cutoff was then used to determine "High PTS level." Respondents with scores below 4 were categorized as "Unlikely PTS," and those with scores of 4 and above were categorized and presented in the tables as "Possible PTS."

            Source: Q128B, Q128D, Q128E, Q128F

            Responses: Possible PTS
                        Unlikely PTS

High Anxiety Level, Past 30 Days: Respondents were asked 4 items to assess how often they experienced symptoms of anxiety associated with stress in the past 30 days, such as "feeling nervous, anxious, on edge, or worrying a lot about different things" and "trouble falling asleep or staying asleep." Responses were provided on a 4-point scale, ranging from "Not at all" to "More than half the days." To create an anxiety level scale, the responses on the 4 items were recoded (i.e., "More than half the days" was assigned a value of 1, "Several days" was assigned a value of .667, "One or two days" was assigned a value of .333, and "Not at all" was assigned a value 0) and averaged. Anxiety level was then dichotomized based on a cutoff value. Those participants with an average score of .75 or greater were classified and presented in the tables as "High anxiety," whereas those with an average score of less than .75 were classified as "Low anxiety."

Source:	Q126A – Q126D

Responses:	High anxiety level
	Low anxiety level

High Anger Propensity: Respondents were asked 4 items about how much behaviors related to anger described them, including "I often find myself getting angry at people or situations," "When I get angry, I get really mad," and "When I get angry I stay angry." Responses for these 3 items were measured on a 5-point scale, ranging from "Not at all" to "A great deal." To create an anger propensity scale, the response values on these 3 items were recoded (i.e., "A great deal" was assigned a value of 1, "A lot" was assigned a value of .75, "Somewhat" was assigned a value of .5, "A little" was assigned a value of .25, and "Not at all" was assigned a value 0). The fourth item asked respondents about internalization of anger on a 5-point scale, ranging from "Other people never know when I am angry" to "Other people always know when I am angry." Responses to this item were recoded in the same way as the other 3 items (i.e., "Other people always know when I am angry" was assigned a value of 1, "Other people often know when I am angry" was assigned a value of .75, "Other people sometimes know when I am angry" was assigned a value of .5, "Other people rarely know when I am angry" was assigned a value of .25, and "Other people never know when I am angry" was assigned a value of 0). The scores for all 4 items were then averaged, and anger propensity was dichotomized based on a cutoff value. Those with an average score of .75 or greater were classified as "High anger," whereas those with an average score of less than .75 were classified as "Low anger."

Source:	Q134, Q139C, Q139I, Q168B

Responses:	High anger
	Low anger

Suicide Ideation or Attempt: Respondents were asked two items about suicidal ideation and two items about suicide attempt to determine whether either had occurred and the timing of the occurrence(s). If respondents answered "Yes" to lifetime suicidal ideation for Q137, they were asked a follow-up item about when the ideation had occurred; if respondents answered "Yes" to lifetime suicide attempt for Q138, they were asked a follow-up item about when the attempt had occurred. Timeframes included within the past year, since joining the military, and before joining the military. Respondents who indicated they had seriously considered (suicidal ideation) or attempted suicide within the past year were classified as "Yes, suicidal ideation or attempt in the past year;" those who did not indicate either ideation or attempt were classified as "No suicidal ideation or attempt in the past year."

Source:	Q137, Q137A, Q138, Q138A

Responses:	Yes, suicidal ideation or attempt in the past year
	No suicidal ideation or attempt in the past year

Physical and Sexual Abuse History: Respondents were asked 6 items about physical and sexual abuse history before joining the military and since joining the military, as well as the perpetrator of the violence, i.e., either a civilian or someone in the military. Response options were "Yes" and

"No." Physical and sexual abuse occurrences were combined, respectively, to reflect whether the respondent had experienced any physical abuse or any sexual abuse in his or her lifetime.

Source: Q127A – Q127F

Responses: Yes
No

High Risk-Taking Propensity: Respondents were asked 3 items about how much behaviors related to risk-taking described them, such as "You might say I act impulsively" and "I go for the thrills in life when I get a chance." Responses were measured on a 5-point scale, ranging from "Not at all" to "A great deal." To create a risk-taking propensity scale, the response values for these 3 items were recoded (i.e., "A great deal" was assigned a value of 1, "A lot" was assigned a value of .75, "Somewhat" was assigned a value of .5, "A little" was assigned a value of .25, and "Not at all" was assigned a value 0) and averaged. Risk-taking propensity was then dichotomized based on a cutoff value. Those with an average score of .75 or greater were classified and presented in the tables as "High risk-taking," whereas those with an average score of less than .75 were classified as "Low risk-taking."

Source: Q139G, Q139H, Q168G

Responses: High risk-taking
Low risk-taking

Religiosity/Spirituality Index: Respondents were asked about religious/spiritual beliefs: "My religious/spiritual beliefs influence how I make personal decisions in my life." The item was derived from the 2010 National Survey on Drug Use and Health (NSDUH), sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). Responses were provided on a 4-point scale, ranging from "Strongly disagree" to "Strongly agree." The response choices were converted to a religiosity/spirituality index, with "Strongly agree" indicative of 'High,' "Agree" indicative of 'Medium,' and "Disagree" and "Strongly disagree" combined to indicate 'Low religiosity/spirituality.' There was also a response option for "Not applicable."

Source: Q115

Responses: High
Medium
Low
Not applicable

Lifetime Self-Inflicted Injury: Respondents were asked an item about intentional self-inflicted injuries, defined as "scratching, cutting, or burning" oneself, but not in an attempt to commit suicide. Response options were provided on a 5-point scale, ranging from "Never" to "6 or more times." Reponses were combined to reflect at least 1 incident in the participant's lifetime.

Source: Q135

Responses: Yes

No

Positive Coping: Respondents were asked 13 items on how they respond when they feel pressured, stress, depressed, or anxious; four of these items were used to determine whether they use positive coping techniques. These items were "Talk to a friend or family member," "Exercise or play sports," "Engage in a hobby," and "Think of a plan to solve the problem." Response choices were provided on a 4-point scale, ranging from "Never" to "Frequently;" "Never" was assigned a value of 1, "Rarely" was assigned a value of 2, "Sometimes" was assigned a value of 3, and "Frequently" was assigned a value of 4. To create a positive coping scale, the responses were averaged. Positive coping was then dichotomized based on cutoff values. Those with an average score of less than 3 were classified as 'Low Positive Coping,' whereas those with an average score of 3 or higher were classified as 'High Positive Coping.'

>**Source:**   Q122A, Q122E, Q122F, Q122I

>**Responses:**   Low positive coping
>High positive coping

Avoidance Coping: Respondents were asked 13 items on how they respond when they feel pressured, stress, depressed, or anxious; three of these items were used to determine whether they use avoidance coping techniques. These items were "Get something to eat," "Sleep," and "Spend time by myself." Response choices were provided on a 4-point scale, ranging from "Never" to "Frequently;" "Never" was assigned a value of 1, "Rarely" was assigned a value of 2, "Sometimes" was assigned a value of 3, and "Frequently" was assigned a value of 4. To create an avoidance coping scale, the responses were averaged. Avoidance coping was then dichotomized based on cutoff values. Those with an average score of less than 3 were classified as 'Low Avoidance Coping,' whereas those with an average score of 3 or higher were classified as 'High Avoidance Coping,'

>**Source:**   Q122G, Q122K, Q122M

>**Responses:**   Low avoidance coping
>High avoidance coping

VIII. Sexual Orientation and Attraction

Sexual Orientation: Respondents were asked to indicate their sexual orientation from 5 response choices: "Heterosexual ('straight')," "Gay or lesbian," "Bisexual," "Something else," or "Not at all sure." Responses were dichotomized for analysis purposes into "Heterosexual" and "Lesbian, Gay, or Bisexual (LGB)." Those who indicated "Something else" or "Not at all sure" were not included in the analyses because it was unclear how to categorize them; we did not want to assume that they identified as either heterosexual, or lesbian, gay, or bisexual.

>**Source:**   Q98

>**Responses:**   Heterosexual
>Gay or lesbian
>Bisexual

Something else
Not at all sure

Sexual Attraction: Respondents were asked about their sexual attraction, irrespective of their self-identified sexual orientation, and provided with 7 response choices representing the spectrum of attraction from 'Only attracted to the same sex' (i.e., males/females) to 'Only attracted to the opposite sex.' Response options were also provided for "Not attracted to either males or females" and "Not sure." The variable for gender was used to categorize same sex from opposite sex attraction.

Source: Q4, Q99

Responses: Only attracted to males
                  Mostly attracted to males
                  Equally attracted to males and females
                  Mostly attracted to females
                  Only attracted to females
                  Not attracted to either males or females
                  Not sure

IX. Service Commitment

Level of Service Commitment: Respondents were asked 3 items to assess level of service commitment to the military. The items assessed job satisfaction, likelihood to remain on active military duty beyond current enlistment term, and likelihood to stay on active military duty for at least 20 years. The job satisfaction item was presented on a 4-point scale, ranging from "Very dissatisfied" to "Very satisfied." The likelihood to remain items were presented on a 5-point scale, ranging from "Very unlikely" to "Very likely." To create a scale of service commitment, the two items measuring likelihood to remain in the service were averaged together to create a single score. The job satisfaction item and the likelihood to remain item were then converted to comparable scales, averaged together, and multiplied by 100 to represent percentage of service commitment, and then divided into 4 categories: 'Detached' (scores less than 20), 'Low' service commitment (scores between 20 and 50), 'Moderate' service commitment (scores between 51 and 85), and 'High' service commitment (scores greater than 85).

Source: Q9, Q10, Q11

Responses: High
                  Moderate
                  Low
                  Detached

Appendix B: Privacy and Consent Statement

Please read the information in the statement below. Do you consent to participate?

✔ Yes   ✖ No

If you experience technical difficulties with the survey, please call the survey contractor (ICF International) toll-free at 1-877-713-2816 or send an e-mail to our helpdesk at 2011HRBSurvey@icfi.com.

RCS Number: DD-HA(AR)2189
Expiration Date: June 30, 2013

Privacy Act Statement: This information is provided in accordance with Public Law 93-579, the Privacy Act of 1974.

Authority: Authority for the survey includes, but is not limited to: DODD 1010.4, Drug and Alcohol Abuse. The Under Secretary of Defense for Personnel & Readiness shall, in coordination with the Office of the Assistant Secretary of Defense (Health Affairs) (OASD (HA)) and the DoD Coordinator for Drug Enforcement Policy and Support, periodically assess the extent of drug and alcohol abuse. DODD 1010.10, Health Promotion. Directive establishes a health promotion policy within the Department of Defense to improve and maintain military readiness and the quality of life of DoD personnel and other beneficiaries. The Office of the Assistant Secretary of Defense (Health Affairs) (OASD (HA)) shall coordinate health data collection efforts to ensure standardization and facilitate joint studies across DoD components.

Purpose: This is a research study for the Department of Defense (DoD) designed to provide a comprehensive, nationwide assessment of health-related behaviors for active duty service members.

Routine Uses: None, except those generally permitted under 5 USC 552a(b) of the Privacy Act.

Selection: You were randomly selected from active duty personnel to represent your Service branch in this important research.

Confidentiality: Your answers will be seen only by civilian researchers. No military personnel will be able to see them. You will submit your completed questionnaire directly to a civilian scoring contractor, so no member of the military will ever see your completed questionnaire. The information you provide will be combined with that from other military personnel to prepare a statistical report. At no time will your individual data be reported. This questionnaire is anonymous.

Participation: Your participation in this survey is voluntary and anonymous. We hope that you will choose to participate, however no negative consequences to you or your assignments, promotions, or benefits to which you are entitled will result should you choose not to, nor will there be any negative consequences from your Command chain. If you choose to participate, we encourage you to answer all of the questions honestly, but you are not required to answer any question to which you object.

Risks: If you would like to seek counseling or other mental or behavioral health care, many resources are available to you, including:

- Military OneSource, a 24/7 resource for Military Members, Spouses & Families http://www.militaryonesource.com

- The Health.mil website at http://www.health.mil/MHSFor/ServiceMembersandFamilies.aspx offers links to mental and behavioral health care sources

- The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury hosts a 24/7 Outreach Center: (toll-free) 1-866-966-1020 or http://www.dcoe.health.mil/24-7help.aspx

- The Real Warriors Campaign at http://www.realwarriors.net offers links and information

- Afterdeployment.org http://www.afterdeployment.org offers wellness resources for the military community

If you have any suicidal thoughts, please seek help immediately. We encourage you to contact your unit's chaplain or a mental health professional. Also, you can contact a civilian counseling hotline: 1-800-784-2433 (1-800-SUICIDE: this is an anonymous, civilian hotline).

Length: The survey questionnaire will take you about 45 minutes to one hour to complete.

Consent: In order to protect your identity, we do not request that you sign a consent form. In returning a completed questionnaire, you will have indicated your agreement to participate.

If you experience technical difficulties with the survey, or if you have questions about the survey or about your rights as a survey participant, please call the survey contractor (ICF International) toll-free at 1-877-713-2816 or send an e-mail to our helpdesk at 2011HRBSurvey@icfi.com.

A support letter from your leadership is posted on the following link:

http://www.tricare.mil/tma/StudiesEval.aspx

If you do not wish to complete the survey and you would like to opt-out of any further messages, click here or call the ICF helpdesk toll-free at 1-877-713-2816

Appendix C: 2011 Health Related Behaviors Survey of Active Duty Military Personnel

Web-based Questionnaire

[PROGRAMMING COMMENTS ARE CONTAINED IN BRACKETS]
[RESPONDENT-FACING ITEMS BEGIN HERE]

PLEASE NOTE:
This survey will take about 40 minutes to complete. Please try to complete it in one session. To preserve your privacy, if you stop before you are finished with the survey, your answers will be erased and you will need to start the survey over from the beginning.

INSTRUCTIONS:

1. Please use the survey navigation buttons below (*Next* and *Back*) to move through the survey and do **NOT** use your browser's forward and back buttons.

2. Please try to be as accurate and honest as possible.

Thank you for agreeing to take our survey!

BASE: ALL RESPONDENTS - MANDATORY
Q1.   In which Service are you serving?

[UNLESS OTHERWISE NOTED, RESPONSES ARE PRESENTED VERTICALLY ALIGNED]
[UNLESS OTHERWISE NOTED, NUMBER CODES FOR THE RESPONSES WERE NOT PRESENTED WITH THE RESPONSE LABEL.]
1. Army [SKIP TO 2C]
2. Navy [SKIP TO 2C]
3. Marine Corps [SKIP TO 2C]
4. Air Force [SKIP TO 2C]
5. Coast Guard [THIS CODE WAS AUTOFILLED BASED ON CG URL LINK]

[PRESENT Q2A AND Q2B ON SAME SCREEN]

BASE: COAST GUARD (Q1=5) - MANDATORY
Q2A.   Within which United States Coast Guard district is your unit located? Please select ONE. Click here to see a map of Coast Guard

1. Headquarters - Washington, DC [need to align codes in dataset to match these]
2. District 1
3. District 5
4. District 7
5. District 8
6. District 9
7. District 11
8. District 13
9. District 14
10. District 17

11. Other Command: _____ [Q2A_a]

Q2B **Are you serving on shore, sea, or air duty? Please select ONE.**

1. Shore duty
2. Sea duty
3. Air duty

Q2C. **In which type of unit do you serve? Please select ONE response only. If you are in a unit which might be classified as more than one type, which most often describes the work that you do in the unit?**

[UNLESS OTHERWISE NOTED IN THIS DOCUMENT THE 'Decline to Answer' RESPONSE WAS **NOT** PRESENTED ON THE INITIAL SCREEN. IF NO RESPONSE WAS SELECTED, THE ITEM WAS PRESENTED A SECOND TIME BUT THIS TIME WITH A DECLINE TO ANSWER ON THE SUBSEQUENT SCREEN.]

1. Infantry (including airborne, air assault, amphibious assault forces)
2. Armored/Tank
3. Artillery/Naval gun crew
4. Combat engineer
5. Aircraft aircrew
6. Aircraft/Missile command and control
7. Reconnaissance, surveillance, or target acquisition
8. Communications, signals, or military intelligence
9. Headquarters, command, or administrative
10. Logistics (including acquisition, supply or personnel transportation, storage, or distribution)
11. Maintenance or repair - computers or electronics
12. Maintenance or repair - vehicles
13. Maintenance or repair - ship, aircraft, missile, or space systems
14. Maintenance or repair - other
15. Food preparation or food service
16. Medical, dental, or other healthcare
17. Recruitment
18. Security, military police, maritime enforcement/rescue
19. Training/Education
20. Other type of unit not listed
21. Decline to answer

Q2D. **What is your Active Duty status?**

1. Regular Active Duty
2. Reserve member serving on Active Duty
3. National Guard member serving on Active Duty
4. Not currently serving on Active Duty

[PRESENT Q3 AND Q4 ON SAME SCREEN]

Q3 **What is your current pay grade?**

1. E1 - E4
2. E5 - E6
3. E7 - E9
4. Officer Trainee

5. WO1 - WO5
6. O1 - O3
7. O4 - O10

BASE: ALL RESPONDENTS - MANDATORY
Q4.   Are you…?

1. Male
2. Female

[PRESENT Q5 AND Q6 ON SAME SCREEN]

BASE: ALL RESPONDENTS
Q5   How long have you been on active duty? If you had a break in service, count current time and time in previous tours, but NOT time during the break in service.

   Q5A: **Years: _____** [2 DIGITS; 0 - 65]   Q5B: **Months: _____** [2 DIGITS; 0 - 11]

BASE: ALL RESPONDENTS
Q6   As of today, how many months have you been assigned to your CURRENT permanent post, base, ship, or duty station? Please include any extension of your present tour in your count. However, do NOT count previous tours at this duty station.

1. 1 month or less
2. 2 - 3 months
3. 4 - 6 months
4. 7 - 12 months
5. 13 - 18 months
6. 19 - 24 months
7. 25 - 36 months
8. More than 3 years

[PRESENT Q7 AND Q8 ON SAME SCREEN]
BASE: ALL RESPONDENTS
Q7   How many months during the PAST 12 MONTHS have you been AWAY from your permanent duty station (berthed out of the area, not at home), not including medical or personal leave?

1. 0 months
2. Less than 1 month
3. 1 or 2 months
4. 3 or 4 months
5. 5 or 6 months
6. 7 or 8 months
7. 9 or 10 months
8. 11 or 12 months

BASE: ALL RESPONDENTS - MANDATORY
Q8   What is the ZIP code or APO or FPO number for your CURRENT post, base, ship, or other duty station where you spend most of your duty time?

   _____ [5 DIGITS]

BASE: ALL RESPONDENTS
Q9   All in all, how satisfied or dissatisfied are you with your current primary MOS / PS / Rating / Designator / AFSC?

1. Very satisfied

2. Satisfied
3. Dissatisfied
4. Very dissatisfied

[PRESENT Q10 ON SAME SCREEN AS Q11]
BASE: ALL RESPONDENTS
Q10 Assuming you could stay on active duty beyond your current enlistment term, how likely is it that you would choose to do so?

1. Very likely
2. Likely
3. Neither likely nor unlikely
4. Unlikely
5. Very unlikely

BASE: ALL RESPONDENTS
Q11 If you could stay on active duty as long as you want, how likely is it that you would choose to serve in the military for at least 20 years?

1. I already have 20 or more years of service
2. Very likely
3. Likely
4. Neither likely nor unlikely
5. Unlikely
6. Very unlikely

BASE: ALL RESPONDENTS
Q12 What is your highest level of education?

1. I did not graduate from high school
2. GED or ABE certificate
3. High school diploma
4. Trade or technical school graduate
5. Some college but not a 2- or 4-year degree
6. 2-year college degree (AA or equivalent)
7. 4-year college degree (BA, BS, or equivalent)
8. Graduate or professional study but no graduate degree
9. Graduate or professional degree

[PRESENT Q13, Q14, AND Q15 ON SAME SCREEN]

BASE: ALL RESPONDENTS
Q13 Are you Hispanic or Latino?

1. No, not Hispanic or Latino
2. Yes, Hispanic or Latino

BASE: ALL RESPONDENTS
Q14 What is your race? Please select ONE OR MORE responses that best characterize you.

[MULTIPLE RESPONSE]

1. American Indian or Alaska Native
2. Asian
3. Black or African American
4. Native Hawaiian or other Pacific Islander
5. White

BASE: ALL RESPONDENTS
Q15   **How old are you?**

_____ [2 DIGITS; 18 - 65]

BASE: ALL RESPONDENTS
Q16   **About how tall are you <u>without shoes</u> on?**

Q16A: **Feet:** _____ [1 DIGIT; 3 – 7]   Q16B: **Inches:** _____ [2 DIGITS; 0 - 11]

BASE: ALL RESPONDENTS
Q17   **How much do you weigh <u>without shoes</u> on? (If you are currently pregnant, what was your typical weight before pregnancy?)**

Pounds: _____ [3 DIGITS; 0 - 500]

BASE: ALL RESPONDENTS - MANDATORY
Q18   **Are you currently married?**

1. No
2. Yes [SKIP TO Q18B]

BASE: NOT CURRENTLY MARRIED (Q18=1)
Q18A   **Have you ever been married?**

1. No, never married
2. Yes, but now divorced
3. Yes, but now widowed

BASE: CURRENTLY MARRIED (Q18=2)
Q18B   **Are you currently separated or have you filed for divorce from your spouse?**

1. No
2. Yes

[IF CURRENTLY MARRIED (Q18=2) PRESENT Q19 AND Q20 ON SAME SCREEN.]

BASE: ALL RESPONDENTS
Q19   **Is your spouse or significant other now living with you at your present duty location?**

1. I do not have a spouse or significant other [ONLY PRESENT OPTION IF Q18=1; SKIP TO Q21]
2. No, not living with me
3. Yes, living with me

BASE: ALL MARRIED RESPONDENTS OR NOT MARRIED AND HAVE A SIGNIFICANT OTHER (Q18=2 OR Q19=2,3]
Q20   **Is your spouse or significant other also on active duty?**

1. I do not have a spouse or significant other [ONLY PRESENT OPTION IF Q18=1]
2. No, not on active duty
3. Yes, on active duty

[Q21 AND Q22 PRESENTED ON SAME SCREEN]

BASE: ALL RESPONDENTS
Q21   **Are you <u>currently</u> enrolled in a mandatory weight control/management program?**

1. No
2. Yes

BASE: ALL RESPONDENTS - MANDATORY
Q22   Did you have to lose weight to join the military?

1. No [SKIP TO Q23]
2. Yes
3. Decline to answer [SKIP TO Q23]

BASE: HAD TO LOSE WEIGHT TO JOIN MILITARY (Q22=2)
Q22A   If you had to lose weight, how much weight did you have to lose to join the military?

1. Less than 5 pounds
2. 5 to 9 pounds
3. 10 to 14 pounds
4. 15 to 19 pounds
5. 20 to 29 pounds
6. 30 or more pounds

BASE: ALL RESPONDENTS
Q23   During the PAST 30 DAYS, how often did you do the following kinds of physical activity? Please select ONE response per row.

[GRID PRESENTATION – UNLESS OTHERWISE NOTED, A QUESTION PRESENTED IN A GRID FORMAT HAS THE RESPONSES ANCHORING THE COLUMNS AND THE LETTERED ITEMS IN THE ROWS. ALSO, UNLESS OTHERWISE NOTED, NUMBER CODES FOR THE RESPONSES WERE NOT PRESENTED WITH THE RESPONSE LABEL.]
1. **About every day**
2. **5 - 6 days a week**
3. **3 - 4 days a week**
4. **1 - 2 days a week**
5. **Less than 1 day a week**
6. **Not at all in the past 30 days**

a. **Moderate Physical Activity** – exertion that raises heart rate and breathing, but you should be able to carry on a conversation comfortably during the activity
b. **Vigorous Physical Activity** – exertion that is high enough that you would find it difficult to carry on a conversation during the activity
c. **Strength Training** – including using weights or resistance training to increase muscle strength

BASE: ALL RESPONDENTS
Q24   During the PAST 30 DAYS, on the days you did the following, how long PER DAY did you typically do each? Please select ONE response per row.

[GRID PRESENTATION]
1. **60 or more minutes**
2. **30 to 59 minutes**
3. **20 to 29 minutes**
4. **Less than 20 minutes**
5. **Never in the past month**

a. **Moderate Physical Activity** – exertion that raises heart rate and breathing, but you should be able to carry on a conversation comfortably during the activity
b. **Vigorous Physical Activity** – exertion that is high enough that you would find it difficult to carry on a conversation during the activity

c. **Strength Training** – including using weights or resistance training to increase muscle strength

BASE: ALL RESPONDENTS - MANDATORY
Q25   Do you have any children under age 18 living with you at your current duty station?

1. No [SKIP TO Q26]
2. Yes
3. Decline to answer [SKIP TO Q26]

[PRESENT Q25A AND Q25B ON SAME SCREEN]
BASE: HAVE CHILDREN UNDER 18 AT CURRENT DUTY STATION (Q25=2)
Q25A   How many children under age 18 live with you at your current duty station?

_____ [2 DIGITS; 1 - 20]

BASE: HAVE CHILDREN UNDER 18 AT CURRENT DUTY STATION (Q25=2)
Q25B   Are the children under age 18 who are living with you at your current duty station…? Please select ONE OR MORE responses that apply to you.

[MULTIPLE RESPONSE]
1. Your own biological children
2. Step-children
3. Adoptive children
4. Foster children
5. Other children

[PRESENT Q25C AND Q25D ON SAME SCREEN]
BASE: HAVE CHILDREN UNDER 18 AT CURRENT DUTY STATION (Q25=2)
Q25C   For the children under age 18 who are living with you, how often do you promote/provide healthy food and beverage choices for meals and snacks?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

BASE: HAVE CHILDREN UNDER 18 AT CURRENT DUTY STATION (Q25=2)
Q25D   How easy or difficult would it be for the children under age 18 who are living with you at your current duty station to gain access to prescription medications within the home that are not intended for them?

1. Very easy
2. Somewhat easy
3. Somewhat difficult
4. Very difficult
5. No such prescription medications

BASE: ALL RESPONDENTS
Q26   Have you been told by a doctor or other health care professional that you have the following? Please select ONE response per row.

[GRID PRESENTATION]
1. No
2. Yes, within the past 2 years
3. Yes, more than 2 years ago

a. High blood pressure

b.   High blood sugar
c.   High cholesterol
d.   Low HDL Cholesterol (low amounts of good cholesterol)
e.   High triglycerides (blood fat)

BASE: ALL RESPONDENTS
Q27   In a TYPICAL WEEK, how often do you eat or drink the following foods? Please select ONE response per row.

[GRID PRESENTATION]
1.   **3 or more times per day**
2.   **2 times per day**
3.   **1 time per day**
4.   **3 - 6 times per week**
5.   **1 - 2 times per week**
6.   **Rarely/ Never**

[RANDOMIZE A-K]
a.   FRUIT: fresh, frozen, canned, or dried
b.   STARCHY VEGETABLES: white potatoes, corn, peas
c.   VEGETABLES: fresh, frozen, canned, cooked or raw (not fried)
d.   WHOLE GRAINS: rye, whole grain bread, brown or wild rice, whole wheat pasta, oatmeal, etc.
e.   DAIRY: milk, yogurt, cheese, etc.
f.   LEAN PROTEIN: baked or broiled lean (low fat) meat, eggs, natural peanut butter, nuts, beans or legumes, tofu
g.   SNACK FOODS: potato chips, corn chips, pretzels
h.   SWEETS: chocolate, candy, cake, pie, breakfast bars, etc.
i.   SUGARY DRINKS: juice, regular soda, Kool-Aid, Yoo-hoo, sports drinks, etc.
j.   CAFFEINATED DRINKS: coffee, tea, or energy drinks (Red Bull, Monster, 5-Hour Energy, Power Shots, etc.)
k.   FRIED FOODS: French fries, fried chicken, donuts, etc.

BASE: ALL RESPONDENTS
Q28   In the PAST 12 MONTHS, how often did you take any of the following supplements? Please select ONE response per row.

[GRID PRESENTATION]
1.   **Two or more times a day**
2.   **Once a day**
3.   **Every other day**
4.   **Once a week**
5.   **Once a month**
6.   **Never in past year**

a.   Multiple vitamins and minerals (such as Centrum, One-A-Day)
b.   Individual vitamins or minerals (such as calcium, iron, selenium, vitamin D)
c.   Antioxidants (such as combinations of beta-carotene, vitamin E, vitamin C)
d.   Body-building supplements that are legal (such as amino acids, protein powders, Creatine, "Andro", Nitric oxide boosters)
e.   Herbal supplements (such as Ginkgo biloba, Echinacea, Ginseng)
f.   Weight loss products (such as Ripped Fuel, caffeine, Dexatrim, Lipo 6, Metabolife, QuickTrim, Xenadrine)
g.   Fish Oil

BASE: ALL RESPONDENTS
Q29   On how many <u>work days</u> in the PAST 12 MONTHS did the following happen to you? Please select ONE response per row.

[GRID PRESENTATION]
1. **More than 20 days**
2. **12 to 20 days**
3. **7 to 11 days**
4. **4 to 6 days**
5. **3 days**
6. **2 days**
7. **1 day**
8. **None**

a. I missed work due to an injury from an on-the-job accident
b. I did not come to work at all because of an illness
c. I did not come to work at all because of a personal accident

BASE: ALL RESPONDENTS
Q30   How many times have the following happened to you? Please select ONE response per row.

[GRID PRESENTATION]
1. **4 or more times**
2. **3 times**
3. **2 times**
4. **1 time**
5. **0 times**

a. Concussion/Brain injury before joining the military
b. Concussion/Brain injury since joining the military
c. Back injury before joining the military
d. Back injury since joining the military

BASE: ALL RESPONDENTS
Q31   In the PAST WEEK, have you had any of the following symptoms? Please select ONE response per row.

[GRID PRESENTATION]
1. **No**
2. **Yes**

[RANDOMIZE A-H]
a. Memory problems or lapses
b. Balance problems
c. Dizziness
d. Ringing in the ears
e. Sensitivity to bright light
f. Irritability
g. Headaches
h. Nightmares

[PRESENT Q32 AND Q33 ON SAME SCREEN]
BASE: ALL RESPONDENTS
Q32   Are you current on your annual health assessment requirements (e.g. physicals, mammograms, etc.)?

1. No
2. Yes
3. Not sure

BASE: ALL RESPONDENTS

Q33   In the PAST 30 DAYS, how often did poor physical health keep you from doing your usual activities, such as work or recreation?

1.   About every day
2.   5 - 6 days a week
3.   3 - 4 days a week
4.   1 - 2 days a week
5.   2 - 3 days in the past 30 days
6.   Once in the past 30 days
7.   Not at all in the past 30 days

[PRESENT Q34 AND Q35 ON SAME SCREEN]
BASE: ALL RESPONDENTS
Q34   In the PAST 30 DAYS, which of the following have prevented you from exercising as much as you would like? Please select ONE OR MORE responses that apply to you.

[MULTIPLE RESPONSE – RANDOMIZE 1-8; 9-10 PRESENTED LAST]
1.   Not enough time
2.   Absence/Inconvenience of exercise facilities
3.   The mission I've been assigned
4.   Policy/Command took precedence
5.   I had an injury
6.   I don't like to exercise
7.   I haven't had anyone to work out with at times I could
8.   The demands of my personal/family life
9.   Another reason
10. I exercise as much as I like

BASE: ALL RESPONDENTS
Q35   Did you pass your most recent physical fitness test?

1.   No
2.   Yes
3.   I have not yet had a physical fitness test since joining the military
4.   I was exempt from my most recent physical fitness test

[PRESENT Q36 AND Q37 ON SAME SCREEN]
BASE: ALL RESPONDENTS
Q36   In the PAST 12 MONTHS, has a medical doctor or other health care professional advised you to quit smoking or using other kinds of tobacco?

1.   No
2.   Yes
3.   Don't smoke

BASE: ALL RESPONDENTS
Q37   The statements below are about how your military work/job and your personal life or family may affect one another. How much do you agree or disagree with each of the following statements? Please select ONE response per row.

[GRID PRESENTATION]
1.   Strongly agree
2.   Somewhat agree
3.   Somewhat disagree
4.   Strongly disagree

a.   The amount of time my military job takes up makes it difficult to fulfill personal or family responsibilities.

b. Due to military work-related duties, I have to make changes to my plans for personal or family activities.
c. My military job produces strain that makes it difficult to fulfill personal or family responsibilities.
d. The demands of my personal life, family, or spouse/partner interfere with military work-related activities.
e. Things I want to do at my military work do not get done because of the demands of my personal life, family, or spouse/partner.

BASE: ALL RESPONDENTS - MANDATORY
Q38 **The next few questions ask about drinking alcoholic beverages which include liquor, such as whiskey or gin, mixed drinks, beer, wine, wine coolers, and any other type of alcoholic beverage. Please remember that your responses are ANONYMOUS. We would like you to answer as honestly and accurately as possible.**

First, in asking about drinks you've had, ONE drink is the equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. A 40-ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks.

Have you had at least 12 alcoholic drinks over your ENTIRE LIFE?

1. No [SKIP TO Q39]
2. Yes
3. Decline to answer [SKIP TO Q39]

BASE: HAD AT LEAST 12 ALCOHOLIC DRINKS IN ENTIRE LIFE (Q38=2)
Q38A **Have you had at least 12 alcoholic drinks during any single year of your life?**

1. No
2. Yes

BASE: ALL RESPONDENTS - MANDATORY
Q39 **In the PAST 12 MONTHS (365 days), on how many different DAYS would you estimate that you drank any type of alcoholic beverage? Your best guess is fine.**

Number of DAYS you drank any type of alcohol in PAST 12 MONTHS (0 TO 365): _____ [3 DIGITS; 0 – 365; IF Q39 = 0, SKIP TO Q55]
1. Decline to answer [PRESENTED ON INITIAL QUESTION SCREEN]

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0/Decline to Answer)
Q40 **In the PAST 12 MONTHS, on those days that you drank alcoholic beverages, on the average, how many drinks did you have? NOTE: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. A 40-ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks.**

Average number of DRINKS you drank per day when you did drink: _____ [2 DIGITS; 0 - 50]

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q41 **In the PAST 12 MONTHS, on how many DAYS did you have 5 or more drinks of any alcoholic beverage? Your best guess is fine.**

Number of DAYS you drank 5 or more drinks of alcohol in PAST 12 MONTHS (0 to 365): _____ [3 DIGITS; 0 - 365]

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0) - MANDATORY
Q42 **During the PAST 12 MONTHS, how often did you drink enough alcohol to feel drunk?**

1. I did not drink enough alcohol to feel drunk in the past 12 months [SKIP TO Q43]

2. Once or twice in the past 12 months
3. 3 to 6 times in the past 12 months
4. 7 to 11 times in the past 12 months
5. 1 to 3 times a month
6. 1 or 2 times a week
7. 3 or 4 times a week
8. Every day or nearly every day
9. Decline to answer [SKIP TO Q43]

BASE: GOT DRUNK AT LEAST ONCE IN PAST YEAR (Q42=2-8)
Q42A **If you drank enough alcohol to <u>feel drunk</u> in the PAST 12 MONTHS, how many drinks did it typically take for you to feel drunk?**

Number of drinks it typically takes for you to feel drunk: _____ [2 DIGITS; 0 - 20]

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q43 **Here are some things that might happen to people while or after drinking, or because of using alcohol. How many times in the PAST 12 MONTHS did each of the following happen to you? Please select ONE response per row.**

[GRID PRESENTATION]
1. 3 or more times
2. 2 times
3. 1 time
4. 0 times

[RANDOMIZE A-M]
a. I found it harder to handle my problems because of my drinking.
b. I received UCMJ punishment (e.g., Court Martial, Article 15, Captain's Mast, Office Hours, Letter of Reprimand, etc.) because of my drinking.
c. I was arrested for a drinking incident not related to driving.
d. I had trouble on the job because of my drinking.
e. I didn't get promoted because of my drinking.
f. I got a lower score on my efficiency report or performance rating because of my drinking.
g. I hit my spouse/significant other after having too much to drink.
h. I got into a fight where I hit someone other than a member of my family when I was drinking.
i. My spouse or live-in fiancé/boyfriend/girlfriend threatened to leave me or left me because of my drinking.
j. My spouse or live-in fiancé/boyfriend/girlfriend asked me to leave because of my drinking.
k. I did something sexually that I regretted.
l. I had trouble with the police (civilian or military) because of my drinking.
m. I spent time in jail, stockade, or brig because of my drinking.

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q44 **How many times in the PAST 12 MONTHS did each of the following happen to you? Please select ONE response per row.**

[GRID PRESENTATION]
1. 3 or more times
2. 2 times
3. 1 time
4. 0 times

[RANDOMIZE A-K]
a. I operated power tools or machinery when I had too much to drink.

b. I drove a car or other vehicle when I had too much to drink.
c. I was arrested for driving under the influence of alcohol.
d. I rode in a car or other vehicle driven by someone who had too much to drink.
e. I drove or rode in a boat, canoe, or other watercraft when I had too much to drink.
f. I was hurt in an accident because of my drinking (e.g., vehicle, work, other).
g. My drinking caused an accident where someone else was hurt or property was damaged.
h. I received detoxification treatment in a hospital or residential center because of my drinking.
i. I had an illness connected with my drinking that kept me from duty for a week or longer.
j. I had to have emergency medical help because of my drinking.
k. I was hospitalized because of my drinking.

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1
DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q45   On how many <u>work days</u> in the PAST 12 MONTHS did the following things happen to you? Please select ONE response per row. "Work day" refers to a day you worked at your duty station or were on quick-response (30 minutes or less) call.

[GRID PRESENTATION]
1.   3 or more work days
2.   2 work days
3.   1 work day
4.   0 work days

[RANDOMIZE A-F]
a. I was hurt in an on-the-job accident because of my drinking.
b. I was late for work or left work early because of drinking, a hangover, or an illness caused by drinking.
c. I did not come to work at all because of a hangover, an illness, or a personal accident caused by drinking.
d. I worked below my normal level of performance because of drinking, a hangover, or an illness caused by drinking.
e. I was drunk while working.
f. I was called in during off-duty hours and reported to work feeling drunk.

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1
DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q46   Next, we are interested in your <u>current</u> behavior regarding alcohol. How often do you typically have a drink containing alcohol?

1. Never
2. Less than once a month
3. Once a month
4. Two to three times a month
5. Once a week
6. Two to three times a week
7. Four or more times a week

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1
DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q47   How many drinks containing alcohol do you have on a TYPICAL DAY when you are drinking?

1. I don't drink
2. 1 or 2
3. 3 or 4
4. 5 or 6
5. 7 to 9
6. 10 or more

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)

Q48 **Next, we have a few questions that ask about somewhat different issues. For each question below, please indicate how often you do the following. Please select ONE response per row.**

    [GRID PRESENTATION]
1. **Never**
2. **Less than Monthly**
3. **Monthly**
4. **Weekly**
5. **Daily or almost Daily**

    [RANDOMIZE A-F]
    a. How often do you have six or more drinks on one occasion?
    b. How often during the past year have you found that you were not able to stop drinking once you had started?
    c. How often during the past year have you failed to do what was normally expected of you because of drinking?
    d. How often during the past year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
    e. How often during the past year have you had a feeling of guilt or remorse after drinking?
    f. How often during the past year have you been unable to remember what happened the night before because you have been drinking?

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)

Q49 **For each question below, have you EVER experienced the following because of drinking? Please select ONE response per row.**

    [GRID PRESENTATION]
1. **No**
2. **Yes, but not in the past year**
3. **Yes, during the past year**

    [RANDOMIZE A-B]
    a. Have you or someone else been injured as a result of your drinking?
    b. Has a relative or friend or a doctor or other health worker been concerned about your drinking or suggested you cut down?

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)

Q50 **Next we have some questions about alcohol use in the PAST 30 DAYS.**

During the PAST 30 DAYS, what was the <u>largest number of drinks</u> of any form of alcohol you had on one occasion?

    Largest number of drinks on any one occasion in the **PAST 30 DAYS:** _____ [2 DIGITS; 0 - 99]

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)

Q51 During the PAST 30 DAYS, on how many days did you have [IF MALE INSERT '5'; IF FEMALE INSERT '4'] or more drinks of beer, wine, or liquor on the same occasion?

1. About every day
2. 5 to 6 days a week
3. 3 to 4 days a week
4. 1 to 2 days a week
5. 2 to 3 days in the past 30 days
6. 1 day in the past 30 days

7. Not at all in the past 30 days

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q52   On those days when you worked during the PAST 30 DAYS, how often did you have a drink while you were working – either on-the-job, during your lunch break, or during a work break?

1. Every work day
2. Most work days
3. About half of my work days
4. Several work days
5. 1 or 2 work days
6. I drank during the past 30 days, but not while working, during a lunch break, or during a work break
7. I didn't drink in the past 30 days

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q53   During the PAST 30 DAYS, on how many days did you drink a CAFFEINATED energy drink (such as Red Bull, Monster, Rockstar, etc.) <u>in combination</u> with an alcoholic beverage?

1. None
2. 1 - 4 days
3. 5 - 19 days
4. 20 - 30 days

BASE: HAS HAD 12 OR MORE ALCOHOLIC DRINKS OVER LIFETIME AND DRANK ON AT LEAST 1 DAY IN THE PAST 12 MONTHS (Q38=2 and Q39>0)
Q54   Next, listed below are some of the reasons people give for drinking beer, wine, or liquor. How important is each reason TO YOU for drinking alcohol? Please select ONE response per row.

[GRID PRESENTATION]
1. Very important
2. Somewhat important
3. Not very important
4. Not at all important

[RANDOMIZE A-H]
a. As a way to celebrate
b. To be sociable
c. To fit in with people you like
d. To forget about your problems
e. To cheer up when you're in a bad mood
f. Because your friends pressure you to drink
g. So that others won't kid/tease you about not drinking
h. I like to drink/I enjoy drinking

BASE: ALL RESPONDENTS
Q55   For the following statements, how much do you agree or disagree with each? Please select ONE per row.

[GRID PRESENTATION]
1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree
5. Don't know [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-D]
a.   Alcoholic beverages cost too much for me.
b.   Drinking to the point of losing control is acceptable.
c.   Alcoholic beverages are difficult for me to get.
d.   Drinking is part of being in my unit.

BASE: ALL RESPONDENTS
Q56   How likely are you to experience the following if you were to drink alcohol? Please select ONE per
row.

[GRID PRESENTATION]
1.   Extremely likely
2.   Very likely
3.   Somewhat likely
4.   Not at all likely

[RANDOMIZE A-D]
a.   Upsetting my family/ friends
b.   Affecting my military career negatively
c.   Doing things that I'd be sorry for later
d.   Getting in trouble with the police or military authorities

BASE: ALL RESPONDENTS
Q57 Listed below are forms of treatment or assistance you could obtain for alcohol-related issues. IF you were
to have a problem with drinking, how likely would you be to use each? Please select ONE response per row.

[GRID PRESENTATION]
1.   Extremely likely
2.   Very likely
3.   Somewhat likely
4.   Not at all likely
5.   Not familiar [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-J]
a.   Alcoholics Anonymous (AA) meetings
b.   Family Services Centers
c.   Outpatient/ Behavioral (Mental) Health Counseling Services
d.   Military OneSource
e.   Community Counseling Centers for Alcohol (YMCA, County Mental Health Counseling)
f.   Church
g.   Private Residential Treatment/ Residential Treatment outside the military
h.   Military Residential Treatment Facility
i.   Substance Abuse Prevention Personnel in Unit
j.   Military chaplain

BASE: DRANK AT LEAST 12 DRINKS IN LIFE AND DRANK ON AT LEAST 1 DAY IN THE PAST 12
MONTHS (Q38=2 OR Q39>0) (CURRENT DRINKERS)
Q58   How likely are you to seek treatment for your alcohol use in the NEXT 6 MONTHS?

1.   Already in treatment
2.   Absolutely certain
3.   Probably
4.   Possibly
5.   Not at all likely
6.   I do not drink alcohol

BASE: DRANK AT LEAST 12 DRINKS IN LIFE AND INDICATED A NUMBER OF 0 OR HIGHER AT Q39
(Q38=2 AND (Q39=0 OR Q39>0))   (CURRENT OR FORMER DRINKERS)
Q59   Not counting small tastes or sips, about how old were you when you drank your first alcoholic
beverage (beer, wine, liquor, etc.)?

  1. 14 years old or younger
  2. 15 to 17 years old
  3. 18 to 20 years old
  4. 21 years old or older
  5. I never have consumed any alcohol

BASE: DRANK AT LEAST 12 DRINKS IN LIFE AND INDICATED A NUMBER OF 0 OR HIGHER AT Q39
(Q38=2 AND (Q39=0 OR Q39>0))   (CURRENT OR FORMER DRINKERS)
Q60 About how old were you when you first began to use alcohol once a month or more often?

  1. 14 years old or younger
  2. 15 to 17 years old
  3. 18 to 20 years old
  4. 21 years old or older
  5. I never have consumed alcohol once a month or more often
  6. I never have consumed any alcohol

BASE: ALL RESPONDENTS - MANDATORY
Q61   Next we would like to ask you some questions about cigarettes and other tobacco products.

Have you smoked at least 100 cigarettes in your entire life? Note: Smoking at least 100 cigarettes would be
equal to 5 or more packs in your entire life.

  1. No [SKIP TO Q72]
  2. Yes
  3. Decline to answer [SKIP TO Q72]

BASE: SMOKED 100+ CIGARETTES (Q61=2)
Q62   When did you start smoking cigarettes?

  1. 14 years old or younger
  2. 15 to 17 years old
  3. 18 to 20 years old
  4. 21 years old or older

BASE: SMOKED 100+ CIGARETTES (Q61=2)
Q63   When was the last time you smoked a cigarette?

  1. Today
  2. During the past 30 days
  3. 1 - 3 months ago
  4. 4 - 6 months ago
  5. 7 - 12 months ago
  6. 1 - 3 years ago
  7. More than 3 years ago

BASE: SMOKED 100+ CIGARETTES (Q61=2) - MANDATORY
Q64   Do you NOW smoke cigarettes every day, some days or not at all?

  1. Every day
  2. Some days
  3. Not at all [SKIP TO Q72]

4. Decline to answer [SKIP TO Q72]

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)
Q65 On how many of the PAST 30 DAYS did you smoke a cigarette?

    Number of Days (from 0 to 30): _____ [2 DIGITS; 0 - 30]

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)
Q66   On the <u>average</u>, how many cigarettes do you now smoke a day?

    Cigarettes per day on average: _____ [2 DIGITS; 0 - 99]

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)
Q67   How often do you smoke with children present?

1. I am not ever around children
2. I never smoke with children present
3. I rarely smoke with children present
4. I sometimes smoke with children present
5. I often smoke with children present

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)
Q68   During the PAST 12 MONTHS, how many times have you QUIT smoking cigarettes for <u>at least 30 consecutive days</u>?

1. Never
2. 1 time
3. 2 to 3 times
4. 4 to 5 times
5. 6 or more times

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)
Q69 During the PAST 12 MONTHS, how many times have you <u>reduced</u> or <u>cut back</u> on the number of cigarettes you smoked for at least 30 consecutive days?

1. Never
2. 1 time
3. 2 to 3 times
4. 4 to 5 times
5. 6 or more times

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)
Q70   How likely will you be to quit smoking cigarettes within the NEXT 6 MONTHS?

1. Not at all likely
2. Possibly
3. Probably
4. Absolutely certain
5. I have already quit smoking cigarettes

BASE: USED AT LEAST 100 CIGARETTES IN LIFETIME AND SMOKE AT LEAST SOME DAYS (Q61=2 and Q64=1, 2)

Q71 **The following list includes reasons that people sometimes give for why they smoke cigarettes. How important are the following reasons for why YOU smoke (if you are a current smoker) or why YOU have smoked cigarettes (if you are a former smoker)? Please select ONE response per row.**

[GRID PRESENTATION]
1. **Very important**
2. **Somewhat important**
3. **Not very important**
4. **Not at all important**
5. **I never smoked** [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-K]
a. Fit in with my friends
b. Fit in with my military unit
c. Irritate those in authority
d. Help relieve stress
e. Help me relax or calm down
f. Help relieve boredom
g. Reduce the amount I eat
h. Avoid gaining weight
i. Help keep me awake or alert
j. Because I can't quit
k. When drinking alcohol

BASE: ALL RESPONDENTS - MANDATORY
Q72 **Have you EVER used chewing tobacco, snuff, or any other form of smokeless tobacco?**

1. No [SKIP TO Q78]
2. Yes
3. Decline to answer [SKIP TO Q78]

BASE: USED ANY FORM OF SMOKELESS TOBACCO EVER (Q72=2)
Q73 **During the PAST 12 MONTHS, how often on the average have you used chewing tobacco, snuff, or other smokeless tobacco?**

1. About every day
2. 5 - 6 days a week
3. 3 - 4 days a week
4. 1 - 2 days a week
5. 2 - 3 days a month
6. About once a month
7. Less than once a month
8. I have not used chewing tobacco, snuff, or other smokeless tobacco in the past 12 months [SKIP TO Q75 AND THEN SKIP TO Q78]

BASE: USED ANY FORM OF SMOKELESS TOBACCO EVER AND USED ANY FORM OF SMOKELESS TOBACCO IN LAST 12 MONTHS (Q72=2 AND Q73<8)
Q74On the average, on the days when you use chewing tobacco, snuff, or other smokeless tobacco, how many TIMES PER DAY do you use it?

Times per day: _____ [2 DIGITS; 0 - 99]

BASE: USED ANY FORM OF SMOKELESS TOBACCO EVER (Q72=2)
Q75 **When was the last time you used chewing tobacco, snuff, or other smokeless tobacco?**

1. Today
2. During the past 30 days
3. More than 1 month ago but within the past 6 months
4. More than 6 months ago but within the past year
5. More than 1 year ago but within the past 2 years
6. More than 2 years ago

BASE: USED ANY FORM OF SMOKELESS TOBACCO EVER AND USED ANY FORM OF SMOKELESS TOBACCO IN LAST 12 MONTHS (Q72=2 AND Q73<8)
Q76 During the PAST 12 MONTHS, how many times have you QUIT using chewing tobacco, snuff, or smokeless tobacco for <u>at least 30 consecutive days</u>?

1. Never
2. 1 time
3. 2 to 3 times
4. 4 to 5 times
5. 6 or more times

BASE: USED ANY FORM OF SMOKELESS TOBACCO EVER AND USED ANY FORM OF SMOKELESS TOBACCO IN LAST 12 MONTHS (Q72=2 AND Q73<8)
Q77 How likely will you be to quit using chewing tobacco, snuff, or smokeless tobacco within the NEXT 6 MONTHS?

1. Not at all likely
2. Possibly
3. Probably
4. Absolutely certain
5. I have already quit using chewing tobacco, snuff or smokeless tobacco

BASE: ALL RESPONDENTS
Q78 During the PAST 12 MONTHS, how often have you smoked the following? Please select ONE response per row.

[GRID PRESENTATION]
1. **About every day**
2. **5-6 days a week**
3. **3-4 days a week**
4. **1-2 days a week**
5. **About once a month**
6. **Less than once a month**
7. **Not in the past 12 months**
8. **I never smoked**

[RANDOMIZE A-B]
a. Cigars
b. Pipes (including a hookah pipe)

BASE: ALL RESPONDENTS
Q79 When was the last time you used any of the following smokeless tobacco products? Please select ONE response per row.

[GRID PRESENTATION]
1. **In the past 12 months**
2. **More than 12 months ago**
3. **Never**

[RANDOMIZE A-D]
a.   Electronic or smoking nicotine delivery products (e.g., E-pipe, E-cigar, E-cigarette, smokeless cigarettes, etc.)
b.   Nicotine dissolvables (e.g., orbs, dissolvable sticks, dissolvable strips, etc.)
c.   Caffeinated smokeless tobacco (e.g., caffeinated snuff or dip)
d.   Nicotine gel

BASE: ALL RESPONDENTS
Q80   There may be a number of factors that would decrease your use of tobacco products at your installation (your post, camp, base, station, ship/support facilities, or other geographic duty location). How much would the following affect how much you use/smoke tobacco products (e.g., cigarettes, chewing/smokeless tobacco)? Please select ONE response per row.

[GRID PRESENTATION]
1.   Would use/ smoke much less
2.   Would use/ smoke somewhat less
3.   Would not affect how much I use/ smoke tobacco
4.   I don't use tobacco products

[RANDOMIZE A-B]
a.   A significant decrease in the number of places at the installation where smoking or using tobacco is permitted
b.   Prices on the installation were increased to match prices outside the installation

BASE: ALL RESPONDENTS
Q81   Listed below are various methods of treatment or assistance you could use for nicotine dependence (resulting from smoking cigarettes, chewing tobacco, etc.). If you used and/or smoked tobacco products and wanted to give up using tobacco products, how likely would you be to use each? Please select ONE response per row.

[GRID PRESENTATION]
1.   Extremely likely
2.   Probably
3.   Possibly
4.   Not at all likely
5.   Not familiar with this [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-K]
a.   Stop all at once (cold turkey)
b.   Gradual decrease in number of cigarettes
c.   Tobacco cessation classes
d.   Prescription medication
e.   Nicotine replacement gum
f.   Nicotine replacement patch
g.   Health care provider counseling
h.   TRICARE telephone quit counselor
i.   UCANQUIT2 online quit support
j.   Herbal supplements
k.   Hypnosis

BASE: ALL RESPONDENTS - MANDATORY
Q82   Next, we have some questions about your experience with a number of different substances.

Have you EVER used the following?

[GRID PRESENTATION]
1.   Never used [SKIP TO Q84 IF ALL A-K = 1, 2, OR 4]
2.   Used at least once in my life [SKIP TO Q84 IF ALL A-K = 1, 2, OR 4]
3.   Used at least once in past 12 months

4. **Decline to Answer** [SKIP TO Q84 IF ALL A-K = 1, 2, OR 4]

    a. Marijuana or hashish (such as "pot," THC, "weed")
    b. Synthetic cannabis ("spice", K2, herbal smoking blend)
    c. Cocaine (including crack)
    d. LSD (such as "acid")
    e. PCP (such as "angel dust" or marijuana laced with PCP)
    f. MDMA (such as "Ecstasy")
    g. Other hallucinogens (such as peyote, mescaline, psilocybin - "shrooms")
    h. Methamphetamine (such as "ice," "crystal meth," "speed," "crank")
    i. Heroin (such as "Smack")
    j. GHB/GBL (such as "Liquid X," "Gamma 10")
    k. Inhalants (such as aerosol sprays, gasoline, poppers, "whippets")

BASE: USED IN PAST YEAR (Q82a-k=3 'Used at least once in past 12 months')
Q83   How many days in the PAST 30 DAYS did you use the following?

[GRID PRESENTATION]
1. **11 or more days**
2. **Used 4 to 10 days**
3. **Used 1 to 3 days**
4. **0 days**

    a. Marijuana or hashish (such as "pot," THC, "weed")
    b. Synthetic cannabis ("spice", K2, herbal smoking blend)
    c. Cocaine (including crack)
    d. LSD (such as "acid").
    e. PCP (such as "angel dust" or marijuana laced with PCP)
    f. MDMA (such as "Ecstasy")
    g. Other hallucinogens (such as peyote, mescaline, psilocybin - "shrooms")
    h. Methamphetamine (such as "ice," "crystal meth," "speed," "crank")
    i. Heroin (such as "Smack")
    j. GHB/GBL (such as "Liquid X," "Gamma 10")
    k. Inhalants (such as aerosol sprays, gasoline, poppers, "whippets")

BASE: ALL RESPONDENTS - MANDATORY
Q84   Next, we have some questions about prescription drugs. These drugs require a doctor's prescription to obtain. We are NOT interested in your use of "over-the-counter" drugs such as Tylenol, Advil, NoDoz, Nytol, or Unisom that can be purchased legally without a doctor's prescription in drug stores or grocery stores.

Have you EVER used the following?

[GRID PRESENTATION]
1. **Never used** [SKIP TO Q86A IF ALL A-D = 1, 2, OR 4]
2. **Used at least once in my life** [SKIP TO Q86A IF ALL A-D = 1, 2, OR 4]
3. **Used at least once in past 12 months**
4. **Decline to Answer** [SKIP TO Q86A IF ALL A-D = 1, 2, OR 4]

    a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
    b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
    c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
    d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: USED AT LEAST ONCE IN PAST 12 MONTHS (ANY Q84a-d=3)
Q85   How many days in the PAST 30 DAYS did you use the following?

[GRID PRESENTATION]
1. **11 or more days**
2. **Used 4 to 10 days**
3. **Used 1 to 3 days**
4. **0 days**

a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: ALL RESPONDENTS - MANDATORY
Q86A   Have you EVER been prescribed the following?

[GRID PRESENTATION]
1. **Never prescribed for me**
2. **Prescribed for me at least once in my life**
3. **Prescribed for me at least once in past 12 months** [SKIP TO Q87]
4. **Decline to Answer**

a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: USED IN PAST 12 MONTHS AND <u>NOT</u> PRESCRIBED IN PAST 12 MONTHS (Q84=3 and Q86A_a-d=1,2,4)
Q86B   How did you obtain the following?

[GRID PRESENTATION]
1. **Prescribed for me in a prior year**
2. **Prescribed for someone else**
3. **Obtained another way**

a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: PRESCRIBED IN THE PAST 12 MONTHS (Q86A_a-d=3)
Q87   IF you were prescribed the following in the PAST 12 MONTHS, how did you use it? Please select ONE response per row.

[GRID PRESENTATION]
1. **Used a lower amount than prescribed**
2. **Used as prescribed**
3. **Used a greater amount than prescribed**

a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: USED AT LEAST ONCE IN PAST 12 MONTHS OR PRESCRIBED IN PAST 12 MONTHS (ANY Q84a-d=3 OR Q86A_a-d=3)

Q88 **How did you obtain the following in the PAST 12 MONTHS? If you obtained it from more than one source, for <u>each row</u>, select ONE OR MORE responses that apply to you.**

[GRID PRESENTATION]
[MULTIPLE RESPONSE BY ROW]
1. **Health care provider at an MTF**
2. **Health care provider at a VA Medical Facility**
3. **Non-military doctor or health care worker**
4. **Emergency Room**
5. **Internet/ Mail order**
6. **Family member or friend**
7. **Dealer/ Street Pharmacist**
8. **Other**

a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: USED AT LEAST ONCE IN PAST 12 MONTHS (ANY Q84a-d=3)

Q89 **What was the reason you took the following in the PAST 12 MONTHS? If there was more than one reason, for <u>each row</u>, select ONE OR MORE responses that apply to you.**

[GRID PRESENTATION]
[MULTIPLE RESPONSE BY ROW]
1. **To control pain**
2. **To feel good (get high or buzzed, etc.)**
3. **To reduce depression**
4. **To reduce anxiety**
5. **To control stress**
6. **To help me sleep**
7. **To help me stay awake**

a. **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.),
b. **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c. **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d. **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)

BASE: ALL RESPONDENTS

Q90 **When was the last time you had to give a urine sample for a random, unannounced drug test?**

1. In the past month
2. 1 to 2 months ago
3. 3 to 6 months ago
4. 7 to 12 months ago
5. 1 year to 3 years ago
6. More than 3 years ago
7. I have never given a urine sample for a random unannounced drug test

BASE: ALL RESPONDENTS

Q91 **While in the military, how many times have you ever altered or tampered with a urine sample that you had to provide?**

1. 0 times
2. 1 time
3. 2 to 3 times
4. 4 or more times

BASE: ALL RESPONDENTS
Q92   If the military stopped random, unannounced drug testing would you be any more likely to use drugs?

1. Much more likely
2. Somewhat more likely
3. No more likely
4. Would not use at all

BASE: ALL RESPONDENTS
Q93 This next set of questions asks about sexual behavior. Please remember that your answers are strictly anonymous and NO ONE can or will link your answers to you.

In the PAST 12 MONTHS, with how many different people did you have sexual intercourse?

1. 20 or more people
2. 10 - 19 people
3. 5 - 9 people
4. 2 - 4 people
5. 1 person
6. I did not have sex in the past 12 months

BASE: ALL RESPONDENTS
Q94 How many NEW sex partners did you have during the PAST 12 MONTHS? A new sex partner is someone you had sexual intercourse with for the first time in the past 12 months.

1. 20 or more people
2. 10 - 19 people
3. 5 - 9 people
4. 2 - 4 people
5. 1 person
6. No new sex partners in the past 12 months

BASE: ALL RESPONDENTS
Q95   In the PAST 12 MONTHS, how often did you use a condom when having sexual intercourse with a new sexual partner?

1. Always
2. Often
3. Sometimes
4. Seldom
5. Never
6. I haven't had sex with a new partner in the past year

BASE: ALL RESPONDENTS - MANDATORY
Q96   In the PAST 12 MONTHS, did you cause or did you have an unintended pregnancy?

1. No [SKIP TO Q97]
2. Yes
3. Decline to answer [SKIP TO Q97]

BASE: CAUSED OR HAD AN UNINTENDED PREGANCY IN THE PAST 12 MONTHS (Q96=2)

Q96A **What form of birth control were you/your partner using when the unplanned pregnancy occurred? Please select ONE OR MORE responses that apply to you.**

[MULTIPLE RESPONSE]

1. No form of birth control
2. Birth control pills
3. IUD
4. Withdrawal method
5. Biological rhythm (natural family planning)
6. Other form of birth control

BASE: ALL RESPONDENTS
Q97 **Have you ever had a sexually transmitted infection – such as gonorrhea, syphilis, chlamydia, HPV, or genital herpes?**

1. No
2. Yes, contracted something within the past 12 months
3. Yes, contracted something more than 1 year ago
4. Have not been tested

BASE: COAST GUARD RESPONDENTS (Q1=5)
Q98 **Do you think of yourself as…?**

1. Heterosexual ('straight')
2. Gay or Lesbian
3. Bisexual
4. Something else
5. Not at all sure

BASE: COAST GUARD RESPONDENTS (Q1=5)
Q99 **People are different in their sexual attraction to other people. Which best describes your feelings?**

1. Only attracted to males
2. Mostly attracted to males
3. Equally attracted to males and females
4. Mostly attracted to females
5. Only attracted to females
6. Not attracted to either males or females
7. Not sure

BASE: ALL RESPONDENTS
Q100 **Next, some questions about substance use around you. In your off-duty hours, how many of your friends do the following when you are around them? Please select ONE response per row.**

[GRID PRESENTATION]
1. **None**
2. **Some friends**
3. **Most friends**

a. Smoke cigarettes
b. Use chewing/ smokeless tobacco
c. Drink alcohol
d. Smoke marijuana
e. Misuse prescription drugs

BASE: ALL RESPONDENTS

Q101   Thinking about the installation at which you are currently stationed (such as your post, camp, base, station, ship and support facilities, or other geographic duty location), how strongly does it DISCOURAGE the use of the following? Please select ONE response per row.

[GRID PRESENTATION]
1. **Not at all**
2. **Somewhat discourages**
3. **Strongly discourages**

a. Cigarettes
b. Chewing/ smokeless tobacco
c. Alcohol
d. Marijuana
e. Prescription drug misuse

BASE: ALL RESPONDENTS
Q102   Thinking about your immediate supervisor(s) at the installation where you are currently stationed, how strongly does he/she DISCOURAGE the use of the following? Please select ONE response per row.

[GRID PRESENTATION]
1. **Not at all**
2. **Somewhat discourages**
3. **Strongly discourages**

a. Cigarettes
b. Chewing/ smokeless tobacco
c. Alcohol
d. Marijuana
e. Prescription drug misuse

BASE: ALL RESPONDENTS
Q103   Next, we have some questions about oral safety and health.

How often do you use a mouth guard in recommended situations (such as combat training, contact sports, etc.)?

1. Always
2. Often
3. Sometimes
4. Seldom
5. Never
6. I have not been in situations requiring a mouth guard
7. I don't have/have not been provided a mouth guard

BASE: ALL RESPONDENTS
Q104   **How often do you brush your teeth with fluoride toothpaste?**

1. Two or more times a day
2. Once a day
3. Several times a week, but less than once a day
4. Once a week
5. A few times a month or less

BASE: ALL RESPONDENTS
Q105   **How often do you floss your teeth?**

1. Once a day

2. A few times a week
3. Once a week
4. Several times a month, but less than once a week
5. Less than once a month

BASE: ALL RESPONDENTS
Q106 Next, some questions on vehicle use.

How often do you use seat belts when you drive or ride in a personally owned vehicle?

1. Always
2. Often
3. Sometimes
4. Seldom
5. Never
6. I didn't drive or ride in a car in the past 12 months

BASE: ALL RESPONDENTS
Q107 In the PAST 12 MONTHS, how often did you wear a helmet when you drove or rode on a motorcycle?

1. Always
2. Often
3. Sometimes
4. Seldom
5. Never
6. I didn't drive or ride on a motorcycle in the past 12 months

BASE: ALL RESPONDENTS
Q108 In the PAST 12 MONTHS, about how many miles did you drive a privately-owned 4-wheeled vehicle(s) (car, truck, van, SUV, etc.) on public roads and highways?

1. 0 - not in the past 12 months
2. Less than 1,000 miles
3. 1,000 - 5,000 miles
4. 5,001 - 7,500 miles
5. 7,501 - 10,000 miles
6. 10,001 - 12,500 miles
7. 12,501 - 15,000 miles
8. More than 15,000 miles

BASE: ALL RESPONDENTS
Q109 In the PAST 12 MONTHS, about how many miles did you drive a privately-owned motorcycle on public roads and highways?

1. 0 - not in the past 12 months
2. Less than 1,000 miles
3. 1,000 - 5,000 miles
4. 5,001 - 7,500 miles
5. 7,501 - 10,000 miles
6. 10,001 - 12,500 miles
7. 12,501 - 15,000 miles
8. More than 15,000 miles

BASE: ALL RESPONDENTS
Q110 In the PAST 12 MONTHS, how many times did you drive or ride on a motorcycle?

1. 40 or more times

2. 21 - 39 times
3. 11 - 20 times
4. 1 - 10 times
5. I didn't drive or ride on a motorcycle in the past 12 months

BASE: ALL RESPONDENTS
Q111 In the PAST 12 MONTHS, did you seek medical care for treatment of the following? Please select ONE response per row.

[GRID PRESENTATION]
1. No
2. Yes

a. Car or motorcycle accident
b. Other type of accidental injury
c. Overuse injury (such as carpal tunnel, sports- or exercise related, etc.)

BASE: ALL RESPONDENTS - MANDATORY
Q112 In the PAST 12 MONTHS, on how many occasions were you in close proximity to weapons firing or explosions?

1. 0 times [SKIP TO Q113]
2. 1 - 10 times
3. 11 - 20 times
4. 21 - 39 times
5. 40 or more times
6. Decline to answer [SKIP TO Q113]

BASE: IN CLOSE PROXIMITY TO WEAPONS FIRE OR EXPLOSIONS 1 OR MORE TIMES (Q112>1 AND NOT DTA)
Q112A In the PAST 12 MONTHS, how often did you wear hearing protection when you were in close proximity to weapons firing or explosions?

1. Always
2. Often
3. Sometimes
4. Seldom
5. Never

BASE: ALL RESPONDENTS
Q113 The following questions ask about your experience with gangs and gang activity in the military. Please select ONE response per row.

[GRID PRESENTATION]
1. No
2. Yes

a. In the past 12 months, have you noticed any gang-related activities among active duty personnel?
b. While in the military, have you been approached about joining a gang/crew in the past 12 months?
c. While in the military, have you been a member of a gang/crew?

BASE: ALL RESPONDENTS
Q114 During the PAST 12 MONTHS, how many times did you attend religious/spiritual services? Please do NOT include special occasions such as weddings, christenings, funerals, or other special events in your answer.

1. More than 52 times

2. 25 - 52 times
3. 6 - 24 times
4. 3 - 5 times
5. 1 - 2 times
6. 0 times

BASE: ALL RESPONDENTS
Q115   My religious/spiritual beliefs influence how I make personal decisions in my life.

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree
5. Not applicable

BASE: ALL RESPONDENTS
Q116   Next, we have some questions about your Internet usage. This would include access by computer, laptop, phone, or other device that can go online.

About how many hours in a TYPICAL WEEK do you spend online for each of the following? Please select ONE response per row.

[GRID PRESENTATION]
1.   Zero
2.   Less than 2 hours per week
3.   2 to 5 hours per week
4.   6 to 10 hours per week
5.   11 to 15 hours per week
6.   16 to 30 hours per week
7.   More than 30 hours per week

[RANDOMIZE A-B]
a.   Work use of the Internet (office, home, on the road, etc.)
b.   Personal use of the Internet (email, browsing, shopping, Facebook, entertainment, gaming, etc.)

BASE: ALL RESPONDENTS
Q117   Have you ever done the following online? Please select ONE response per row.

[GRID PRESENTATION]
1.   No, never
2.   Yes, but more than 30 days ago
3.   Yes, within PAST 30 DAYS

[RANDOMIZE A-I]
a.   Made a purchase online
b.   Bid on a product in an online auction
c.   Participated in an online survey
d.   Posted a picture or commented on a picture on Facebook
e.   Logged in to a checking account online
f.   Watched a video on YouTube
g.   Browsed online classified ads (such as Craig's List)
h.   Downloaded music (for computer, iPod, etc.)
i.   Gambled for money online

BASE: ALL RESPONDENTS
Q118   During the PAST 30 DAYS, how often did emotional difficulties or poor mental health keep you from doing your usual activities, such as work or recreation?

1. About every day
2. 5 - 6 days a week
3. 3 - 4 days a week
4. 1 - 2 days a week
5. 2 - 3 days in the past 30 days
6. Once in the past 30 days
7. Never in the past 30 days

BASE: ALL RESPONDENTS
Q119   In the PAST 12 MONTHS, how often did you feel a lot of stress?

1. Always
2. Often
3. Sometimes
4. Seldom
5. Never

BASE: ALL RESPONDENTS
Q120   In the PAST 12 MONTHS, how much military-related stress have you experienced overall?

1. A lot
2. Some
3. A little
4. None at all

BASE: ALL RESPONDENTS
Q121   During the PAST 12 MONTHS, how much stress did you experience from each of the following? Please select ONE response per row.

[GRID PRESENTATION]
1.   A lot
2.   Some
3.   A little
4.   None at all
5.   **Not applicable** [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-J]
a.   Being deployed – at sea, in the field or in a remote location (include combat-related experiences)
b.   Having to undergo a permanent change of station (PCS)
c.   Problems with my coworkers
d.   Problems with my immediate supervisor(s)
e.   Concern about my performance rating
f.   Change in my work load
g.   Conflicts between my military responsibilities and my family/personal responsibilities
h.   Insufficient training
i.   Being away from my family and friends
j.   Having a baby

BASE: ALL RESPONDENTS
Q122   When you feel pressured, stressed, depressed or anxious, how often do you do each of the following? Please select ONE response per row.

[GRID PRESENTATION]
1.   Frequently
2.   Sometimes
3.   Rarely

4. **Never**

[RANDOMIZE A-M]
a. Talk to a friend or family member
b. Light up a cigarette
c. Have a drink of alcohol (e.g., beer, wine, liquor, etc.)
d. Say a prayer
e. Exercise or play sports
f. Engage in a hobby
g. Get something to eat
h. Smoke marijuana or use other illegal drugs
i. Think of a plan to solve the problem
j. Think about hurting myself or killing myself
k. Sleep
l. Get angry
m. Spend time by myself

BASE: ALL RESPONDENTS
Q123   Do you feel that you experience more stress in the military because you are a [IF MALE (Q4=1) INSERT 'man'; IF FEMALE (Q4=2) INSERT 'woman')?

1. No
2. Yes

BASE: ALL RESPONDENTS
Q124   During the PAST 12 MONTHS, how much stress did you experience from each of the following? Please select ONE response per row.

[GRID PRESENTATION]
1. **A lot**
2. **Some**
3. **A little**
4. **None at all**
5. **Not applicable** [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-J]
a. Finding childcare/daycare
b. Death in the family
c. Divorce or breakup
d. Infidelity or unfaithfulness in a committed relationship
e. Problems with money
f. Problems with housing
g. Health problems that I had
h. Health problems that my family members had
i. Behavior problems with one or more of my children
j. Unexpected events or other major problems (such as, hurricane, flood, home robbery)

BASE: ALL RESPONDENTS
Q125   On how many days in the PAST WEEK did you feel the following for most of the day? Please select ONE response per row.

[GRID PRESENTATION]
1. **5 - 7 days**
2. **3 - 4 days**
3. **1 - 2 days**
4. **Less than 1 day**
5. **Never**

[RANDOMIZE A-E]
a. I was happy
b. I felt angry
c. I felt depressed
d. I was hopeful about the future
e. I felt sad

BASE: ALL RESPONDENTS
Q126   During the PAST 30 DAYS, how often have you been bothered by the following? Please select ONE response per row.

[GRID PRESENTATION]
1. More than half the days
2. Several days
3. One or two days
4. Not at all

[RANDOMIZE A-D]
a. Feeling nervous, anxious, on edge, or worrying a lot about different things
b. Getting tired very easily
c. Trouble falling asleep or staying asleep
d. Becoming easily annoyed or irritable

BASE: ALL RESPONDENTS
Q127   Next, we have some questions about experiences you may have had. Please select ONE response per row.

[GRID PRESENTATION]
1. No
2. Yes

a. <u>BEFORE</u> joining the military, were you ever physically abused, punished, or beaten by a person in authority or having some power over you so that you received bruises, cuts, welts, lumps, or other injuries?
b. SINCE joining the military, have you ever been physically abused, punished, or beaten by someone <u>in the military</u> so that you received bruises, cuts, welts, lumps, or other injuries?
c. SINCE joining the military, have you ever been physically abused, punished, or beaten by a <u>civilian</u> so that you received bruises, cuts, welts, lumps, or other injuries?
d. <u>BEFORE</u> joining the military, did you experience ANY type of unwanted sexual contact? This would mean contact between someone else and your private parts or between you and someone else's private parts.
e. SINCE joining the military, have you experienced ANY type of unwanted sexual contact from anyone <u>in the military</u>?
f. SINCE joining the military, have you experienced ANY type of unwanted sexual contact from any <u>civilian</u>?

BASE: ALL RESPONDENTS
Q128   How much have you been bothered by each of the following in the PAST 30 DAYS? Please select ONE response per row.

[GRID PRESENTATION]
1. Extremely
2. Quite a bit
3. Moderately
4. A little bit
5. Not at all

[RANDOMIZE A-F]
a. Repeated, disturbing dreams of a stressful experience

b. Feeling very upset when something reminded you of a stressful experience
c. Avoiding activities or situations because they reminded you of a stressful experience
d. Feeling emotionally numb or being unable to have loving feelings for those close to you
e. Having difficulty concentrating
f. Feeling jumpy or easily startled

BASE: ALL RESPONDENTS
Q129 At any time in in the PAST 12 MONTHS, did you feel that you need counseling, therapy, or treatment from either a military or civilian mental health professional?

1. No
2. Yes

BASE: ALL RESPONDENTS
Q130 In the PAST 12 MONTHS, did you receive counseling or mental health therapy/treatment from the following? Please select ONE response per row.

[GRID PRESENTATION]
1. No
2. Yes

[RANDOMIZE A-G]
a. Mental health professional at a military facility (e.g., psychologist, psychiatrist, clinical social worker or other mental health counselor)
b. General medical doctor at a military facility
c. General medical doctor at a civilian facility
d. Military chaplain
e. Civilian pastor, rabbi, or other pastoral counselor
f. Civilian mental health professional (e.g., psychologist, psychiatrist, clinical social worker or other mental health counselor)
g. Self-help group (AA, NA)

BASE: ALL RESPONDENTS
Q131 In general, do you think it would damage a person's military career if the person were to seek counseling or mental health therapy/treatment through the military, regardless of the reason for seeking counseling?

1. It <u>definitely would</u> damage a person's career
2. It <u>probably would</u> damage a person's career
3. It probably would **NOT** damage a person's career
4. It definitely would **NOT** damage a person's career

BASE: ALL RESPONDENTS
Q132 For what concerns did you seek counseling or mental health therapy/treatment in the PAST 12 MONTHS? Please select ONE OR MORE responses that apply to you.

[MULTIPLE RESPONSE]

1. Depression
2. Anxiety
3. Family problems
4. Substance use problems
5. Anger management
6. Stress management
7. Other
8. I did not seek help from a mental health professional in the <u>past 12 months</u>

BASE: ALL RESPONDENTS
Q133 IF you received mental health services through the military, how did it affect your career?

1. Very positively
2. Somewhat positively
3. Neither positively nor negatively
4. Somewhat negatively
5. Very negatively
6. I did not receive any mental health services through the military

BASE: ALL RESPONDENTS
Q134 When you get angry, which best describes you?

1. Other people always know when I am angry
2. Other people often know when I am angry
3. Other people sometimes know when I am angry
4. Other people rarely know when I am angry
5. Other people never know when I am angry

BASE: ALL RESPONDENTS
Q135 In your <u>lifetime</u>, how often have you intentionally hurt yourself - for example, by scratching, cutting, or burning - even though you were not trying to commit suicide?

1. Never
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

BASE: ALL RESPONDENTS
Q136 <u>Since joining the military</u>, how often have you intentionally hurt yourself - for example, by scratching, cutting, or burning - even though you were not trying to commit suicide?

1. Never
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

BASE: ALL RESPONDENTS - MANDATORY
Q137 Have you ever seriously considered suicide?

1. No [SKIP TO Q138]
2. Yes
3. Decline to answer [SKIP TO Q138]

BASE: CONSIDERED SUICIDE (Q137=2)
Q137A If you have seriously considered suicide, did you consider it during the following periods? Please select ONE response per row.

[GRID PRESENTATION]
1. No
2. Yes

a. Within the past year
b. Since joining the military
c. Before joining the military

d.   Within 6 months before leaving for deployment / mission
e.   During a deployment / mission
f.   Within 6 months after returning from a deployment / mission

BASE: ALL RESPONDENTS - MANDATORY
Q138   Have you ever attempted suicide?

1.   No [SKIP TO Q139]
2.   Yes
3.   Decline to answer [SKIP TO Q139]

BASE: ATTEMPTED SUICIDE (Q138=2)
Q138A   If you have ever attempted suicide, did you attempt it during any of the following periods? Please select ONE response per row.

[GRID PRESENTATION]
1.   No
2.   Yes

a.   Within the past year
b.   Since joining the military
c.   Before joining the military
d.   Within 6 months before leaving for deployment / mission
e.   During a deployment / mission
f.   Within 6 months after returning from a deployment / mission

BASE: ALL RESPONDENTS
Q139   How much do the following statements describe you? Please select ONE response per row.

[GRID PRESENTATION]
1.   A great deal
2.   A lot
3.   Somewhat
4.   A little
5.   Not at all

[RANDOMIZE A-J]
a.   I am very optimistic.
b.   I enjoy facing many challenges that I need to overcome.
c.   I often find myself getting angry at people or situations.
d.   If I'm under stress I can easily find the resources to help me.
e.   I love learning about new technology.
f.   I feel overwhelmed when I'm in stressful situations.
g.   You might say I act impulsively.
h.   I like to test myself every now and then by doing something a little chancy or risky.
i.   When I get angry, I get really mad.
j.   I can bounce back from adversity easily.

BASE: ALL RESPONDENTS
Q140   During the past 12 months, did you use any of the following complementary or alternative medicine/treatments? Please select ONE response per row.

[GRID PRESENTATION]
1.   No
2.   Yes

[RANDOMIZE A-S]

a. Acupuncture
b. Homeopathy
c. Herbal medicines (such as St. John's Wort, Gingko Biloba, Echinacea)
d. Chiropractic
e. Massage therapy
f. Exercise/movement therapy (such as Tai Chi, yoga)
g. High dose megavitamins
h. Spiritual healing by others (such as healing ritual or sacrament)
i. Lifestyle diet (such as vegetarian, diet without preservatives or additives, heart-healthy, or diabetic)
j. Relaxation techniques
k. Guided imagery therapy (such as meditation or aromatherapy)
l. Energy healing (such as reiki, polarity therapy)
m. Folk remedies (such as Native American Healing, curanderismo)
n. Biofeedback
o. Hypnosis (self or led by practitioner)
p. Art/music therapy
q. Self-help group
r. Hyperbaric oxygen therapy
s. Prayer for your own health

BASE: ALL RESPONDENTS
Q141 **In the PAST WEEK (past 7 days), about how many hours on <u>average</u> did you sleep <u>each</u> 24 hour period?**

Average hours/minutes per night:

a. **Hours:** _____ [2 DIGITS; 0 - 24]
b. **Minutes:** _____ [2 DIGITS; 0 -59]

BASE: ALL RESPONDENTS - MANDATORY
Q142 **Next, we have some questions concerning deployments and missions.**

Were you <u>unable</u> to deploy in the PAST 12 MONTHS?

1. No [SKIP TO Q143]
2. Yes
3. Decline to answer [SKIP TO Q143]

BASE: UNABLE TO DEPLOY IN PAST 12 MONTHS (Q142=2)
Q142A Why were you unable to deploy? Please select ONE OR MORE responses that characterize you.

[MULTIPLE RESPONSE]

1. I was on training/I needed additional training
2. I was on leave/TAD/TDY
3. I was pregnant
4. I needed/had dental work or dental problems
5. I needed an HIV test
6. I had a family situation
7. I had an injury
8. I had an illness or medical condition
9. I had mental health problems
10. A family member in the Exceptional Family Member Program (EFMP)
11. Another reason

BASE: ALL RESPONDENTS - MANDATORY

Q143   During the PAST 12 MONTHS, did you return early from deployment or mission (before the rest of your unit)?

1. No / Not Deployed [SKIP TO Q144]
2. Yes
3. Decline to answer [SKIP TO Q144]

BASE: HAD TO RETURN EARLY FROM DEPLOYMENT IN PAST 12 MONTHS (Q143=2)
Q143A   Why did you return early from deployment or mission? Please select ONE OR MORE responses that best characterizes you.

[MULTIPLE RESPONSE]

1. I was on training/I needed additional training
2. I was on leave/TAD/TDY
3. I was pregnant
4. I needed/had dental work or dental problems
5. I needed an HIV test
6. I had a family situation
7. I had an injury
8. I had an illness or medical condition
9. I had mental health problems
10. A family member in the Exceptional Family Member Program (EFMP)
11. Another reason

BASE: ALL RESPONDENTS
Q144   Were you actively involved in the rescue, recovery or cleanup for the following missions?

[GRID PRESENTATION]
1. No
2. Yes

a. The Deep Water Horizon oil spill in the gulf
b. The earthquake in Haiti

BASE: ACTIVELY INVOLVED IN EITHER DEEP WATER HORIZON OR HAITI RELIEF MISSION (Q144a-b=2)
Q145   If you were involved in the following, do you have lasting memories, such as nightmares, recurring thoughts or generalized sadness resulting from the events? Please select ONE response per row.

[GRID PRESENTATION]
1. A lot
2. Some
3. A little
4. None at all
5. Not involved in this mission

a. Deep Water Horizon oil spill mission
b. Haiti earthquake mission

BASE: ALL RESPONDENTS
Q146   Are you <u>currently</u> assigned to a Warrior Transition Unit, Medical Hold, Medical Holdover, or Medical Extension Status?

1. No
2. Yes

BASE: ALL RESPONDENTS
Q147 **In which of the following missions have you served? Please select ONE OR MORE responses that apply to you.**

[MULTIPLE RESPONSE]

1. Operations Desert Shield or Desert Storm (e.g., The Persian Gulf)
2. Operation Just Cause (e.g., Panama)
3. Operation Restore Hope (e.g., Somalia)
4. Operation Uphold Democracy (e.g., Haiti)
5. Operations Joint Endeavor or Joint Guard (e.g., Bosnia)
6. Operation Safe Haven (e.g., Cuba)
7. Operation Enduring Freedom (e.g., Afghanistan)
8. Operation Iraqi Freedom (e.g., Iraq)
9. Operation New Dawn (Iraq)
10. Tsunami Relief (e.g., South Asia)
11. Hurricane Relief (e.g., Louisiana, Texas, Mississippi)
12. Other combat and/or peace-keeping mission
13. Other remote
14. None/Did not deploy

BASE: ALL RESPONDENTS - MANDATORY
Q148 **Have you been deployed on either a combat or non-combat mission/deployment <u>since</u> September 11, 2001?**

1. No, not deployed since 9/11/01 [SKIP TO Q168]
2. Yes
3. Decline to answer [SKIP TO Q159]

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q149 **In the PAST 12 MONTHS, approximately how many <u>months</u> were you away in total for all deployments (both combat and non-combat missions)?**

1. I did not deploy in the last 12 months
2. 1 month or less
3. 2 months
4. 3 or 4 months
5. 5 or 6 months
6. 7 or 8 months
7. 9 or 10 months
8. 11 or 12 months

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q150 **Next, we have some questions about your MOST RECENT DEPLOYMENT. A combat zone deployment typically receives imminent danger pay (IDP), hazardous duty pay, and/or combat zone tax exclusion benefits. A non-combat deployment typically does not receive such benefits.**

Was your MOST RECENT DEPLOYMENT since 9/11/2001 a combat zone or non-combat zone deployment?

1. Combat zone
2. Non-combat zone

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q151 **During your MOST RECENT DEPLOYMENT (either combat or non-combat), did you experience any of the following events? Please select ONE response per row.**

[GRID PRESENTATION]
1. **No**
2. **Yes**

[RANDOMIZE A-E; F PRESENTED LAST]
a. Blast or explosion (IED, RPG, land mine, grenade, etc.)
b. Vehicular accident/crash (any vehicle, including aircraft)
c. Fragment wound above the shoulders
d. Bullet wound above the shoulders
e. A fall serious enough to need medical attention
f. Another type of injury

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q152   For your MOST RECENT DEPLOYMENT, how much stress did you experience upon returning home?

1. A great deal
2. A fairly large amount
3. Some/a moderate amount
4. A little
5. None at all

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q153   Following your MOST RECENT DEPLOYMENT, how did your relationship change with your spouse or significant other (fiancé, boyfriend, or girlfriend)?

1. We argued more/had more conflict
2. We got along about the same
3. We argued less/had less conflict/got along better
4. I did not have a spouse or significant other following my most recent deployment

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q154   Since your MOST RECENT DEPLOYMENT, have you divorced or separated from your spouse or significant other?

1. No
2. Yes, divorced
3. Yes, separated
4. I do not have a spouse/significant other

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q155   Did any of the following problems begin or get worse <u>during or after</u> your MOST RECENT DEPLOYMENT? Please select ONE response per row.

[GRID PRESENTATION]
1. **No**
2. **Yes**

[RANDOMIZE A-H]
a. Memory problems or lapses
b. Balance problems
c. Dizziness
d. Ringing in the ears
e. Sensitivity to bright light
f. Irritability
g. Headaches
h. Nightmares

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q156   How did your use of the substances listed below change during your MOST RECENT DEPLOYMENT, compared with your use before you were deployed? Please select ONE response per row.

[GRID PRESENTATION]
1. **Used more when deployed**
2. **Used about the same when deployed**
3. **Used less or not at all when deployed**
4. **I have never used**

[RANDOMIZE A-G]
a.   Alcohol
b.   Cigarettes
c.   Chewing/Smokeless tobacco
d.   Cigars
e.   Prescription medications
f.   Marijuana
g.   Opium, heroin, morphine, etc.

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q157   Did any injury that you received while on your MOST RECENT DEPLOYMENT result in any of the following? Please select ONE response per row.

[GRID PRESENTATION]
1. **No**
2. **Yes**

[RANDOMIZE A-G]
a.   Lost consciousness or got "knocked out" for less than a minute
b.   Lost consciousness or got "knocked out" for 1 to 20 minutes
c.   Lost consciousness or got "knocked out" for more than 20 minutes
d.   Felt dazed, confused, or "saw stars"
e.   Didn't remember the event
f.   Concussion or symptoms of a concussion (such as headache, dizziness, irritability, etc.)
g.   Head injury

BASE: DEPLOYED SINCE SEPT 11, 2001 (Q148=2)
Q158   When were you FIRST prescribed the medications below? Please select ONE response per row.

[GRID PRESENTATION]
1. **Within 3 months before a deployment**
2. **During a deployment**
3. **Within 3 months following return from a deployment**
4. **Not prescribed this within 3 months before, during, or 3 months after a deployment** [RESPONSE COLUMN HAS LIGHT GREY BACKGROUND]

[RANDOMIZE A-E]
a.   **Prescription** stimulants or attention enhancers (such as amphetamines, Ritalin, Prescription diet pills, etc.)
b.   **Prescription** sedatives, tranquilizers, muscle relaxers, or barbiturates (such as Ambien, Quaalude, Valium, Xanax, Rohypnol, Phenobarbital, etc.)
c.   **Prescription** pain relievers (Oxycodone, Percocet, Cough syrups with codeine, Methadone, etc.)
d.   **Prescription** anabolic steroids (such as Deca Durbolin, Testosterone, etc.)
e.   **Prescription** anti-depressants (such as Cymbalta, Strattera, Prozac, Paxil, etc.)

BASE: DEPLOYED OR DECLINED TO ANSWER DEPLOYED SINCE SEPT 11, 2001 (Q148=2, 3) - MANDATORY

Q159   The term "combat zone deployment," as used in this questionnaire, refers to a deployment where you received imminent danger pay (IDP), hazardous duty pay, and/or combat zone tax exclusion benefits.

How many COMBAT deployments (including OIF, OEF, OND - missions where you received IDP, hazardous duty pay, and/or combat zone tax exclusion benefits) have you been on since <u>September 11, 2001</u>?

   1. I have not had any combat zone deployments [SKIP TO Q164]
   2. 1 combat zone deployment
   3. 2 combat zone deployments
   4. 3 or 4 combat zone deployments
   5. 5 or 6 combat zone deployments
   6. 7 or more combat zone deployments
   7. Decline to answer [SKIP TO Q164]

BASE: AT LEAST 1 COMBAT DEPLOYMENT (Q159>1 AND NOT DTA)
Q160   How long was your longest COMBAT zone deployment since <u>September 11, 2001</u>?

   1. Less than 6 months
   2. 6 to 12 months
   3. 13 to 18 months
   4. More than 18 months

BASE: AT LEAST 1 COMBAT DEPLOYMENT (Q159>1 AND NOT DTA)
Q161   In the PAST 12 MONTHS, approximately how many months were you away on COMBAT zone deployments?

   1. Not at all in past 12 months
   2. 1 month or less
   3. 2 months or less
   4. 3 or 4 months
   5. 5 or 6 months
   6. 7 or 8 months
   7. 9 or 10 months
   8. 11 or 12 months

BASE: AT LEAST 1 COMBAT DEPLOYMENT (Q159>1 AND NOT DTA)
Q162   Adding up all your COMBAT deployments, about how long were you deployed for the periods listed below? Please select ONE response per row.

   [GRID PRESENTATION]
   1. Less than 30 days
   2. 30 days to 6 months
   3. 7 to 12 months
   4. 13 to 18 months
   5. 19 to 24 months
   6. 25 to 36 months
   7. 37 to 48 months
   8. More than 48 months

   a. Since September 11, 2001
   b. In the past 5 years (60 months)

BASE: AT LEAST 1 COMBAT DEPLOYMENT (Q159>1 AND NOT DTA)
Q163   Across all your COMBAT zone deployments, about how many times did the following happen? Please select ONE response per row.

   [GRID PRESENTATION]

1. **Never**
2. **1 to 3 times**
3. **4 to 12 times**
4. **13 to 50 times**
5. **More than 50 times**

[RANDOMIZE A-Q]
a. I was sent outside the wire on combat patrols, convoys, or sorties.
b. I, or members of my unit, received incoming fire from small arms, artillery, rockets, or mortars.
c. I, or members of my unit, encountered mines, booby traps, or, or IEDs (improvised explosive devices).
d. I worked with landmines or other unexploded ordnances.
e. My unit fired on the enemy.
f. I personally fired my weapon at the enemy.
g. I engaged in hand-to-hand combat.
h. I was responsible for the death or serious injury of an enemy.
i. I witnessed members of my unit or an ally unit being seriously wounded or killed.
j. My unit suffered causalities.
k. I saw dead bodies or human remains.
l. I handled, uncovered, or removed dead bodies or human remains.
m. Someone I knew well was killed in combat.
n. I took care of injured or dying people.
o. I interacted with enemy prisoners of war.
p. I witnessed or engaged in acts of cruelty, excessive force, or acts violating rules of engagement.
q. I was wounded in combat.

BASE: DEPLOYED OR DECLINED TO ANSWER DEPLOYED SINCE SEPT 11, 2001 (Q148=2, 3) - MANDATORY
Q164   The term "non-combat deployment" refers to a deployment where you did NOT receive IDP, hazardous duty pay, or combat zone tax exclusion benefits. Examples of non-combat include Unit Deployed Programs, on afloat not related to a mission, on exercises or training, as an individual augmentee, or on humanitarian/relief missions.

How many NON-combat deployments (missions where you did not receive IDP, hazardous duty pay, or combat zone tax exclusion benefits) have you been on since <u>September 11, 2001</u>?

1. I have not had any non-combat zone deployments [SKIP TO Q168]
2. 1 non-combat zone deployment
3. 2 non-combat zone deployments
4. 3 or 4 non-combat zone deployments
5. 5 or 6 non-combat zone deployments
6. 7 or more non-combat zone deployments
7. Decline to answer [SKIP TO Q168]

BASE: AT LEAST 1 NONCOMBAT DEPLOYMENT (Q164>1 AND NOT DTA)
Q165   Adding up all your NON-combat deployments, about how long were you deployed for the periods listed below? Please select ONE response per row.

[GRID PRESENTATION]
1. **Less than 30 days**
2. **30 days to 6 months**
3. **7 to 12 months**
4. **13 to 18 months**
5. **19 to 24 months**
6. **25 to 36 months**
7. **37 to 48 months**
8. **More than 48 months**

a. Since September 11, 2001
b. In the past 5 years (60 months)

BASE: AT LEAST 1 NONCOMBAT DEPLOYMENT (Q164>1 AND NOT DTA)
Q166 How long was your longest NON-combat deployment since <u>September 11, 2011</u>?

1. Less than 6 months
2. 6 to 12 months
3. 13 to 18 months
4. More than 18 months

BASE: AT LEAST 1 NONCOMBAT DEPLOYMENT (Q164>1 AND NOT DTA)
Q167 In the PAST 12 MONTHS, approximately how many months were you away on NON-combat deployments ONLY?

1. Not at all in past 12 months
2. 1 month or less
3. 2 months or less
4. 3 or 4 months
5. 5 or 6 months
6. 7 or 8 months
7. 9 or 10 months
8. 11 or 12 months

BASE: ALL RESPONDENTS
Q168 How much do the following statements describe you? Please select ONE response per row.

[GRID PRESENTATION]
1. A great deal
2. A lot
3. Somewhat
4. A little
5. Not at all

[RANDOMIZE A-I]
a. I like overcoming challenges.
b. When I get angry I stay angry.
c. I function well under adverse circumstances.
d. I'm always up for a new experience.
e. I dislike revealing much about myself to others.
f. When I get angry at someone, I want to hurt the person.
g. I go for the thrills in life when I get a chance.
h. My anger prevents me from getting along with people as well as I'd like to.
i. I can easily control what happens in my life.