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### **Alcohol on U.S. Naval Vessels: An Assessment of Policies to Adopt to Best Promote Responsible Alcohol Consumption**

December 2022

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**Naval Postgraduate School**

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.

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## ABSTRACT

This thesis surveys the preferences and views of U.S. naval officers regarding different alcohol policies and what they believe would best promote responsible alcohol consumption among U.S. sailors. Using a mixed method of qualitative and quantitative approaches, I document the background of alcohol in the U.S. Navy in conjunction with identifying the preferences and views of U.S. naval officers at Naval Postgraduate School (NPS). The qualitative analysis stems from a literature review of alcohol misuse, culture, and history of alcohol policies in the U.S. Navy. Through a survey of 154 U.S. naval officers at NPS, the quantitative analysis reports the preferences and views regarding current alcohol policy on U.S. naval vessels from officers, who will rotate into increased leadership roles and potentially command of such vessels. Moreover, the survey identifies other factors to consider when incorporating an effective alcohol policy. Three alternatives considered to maintaining the status quo are: allow alcohol consumption onboard U.S. naval vessels while in port only, allow alcohol consumption onboard U.S. naval vessels while in port and underway, and revert to total alcohol prohibition. The primary finding is 81.81% of survey participants prefer an alcohol policy that would allow alcohol on U.S. naval vessels to a greater extent than presently. This finding and the remaining survey results may be beneficial to consider when conducting further policy evaluation and research.



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## LIST OF ACRONYMS AND ABBREVIATIONS

ARI	Alcohol-related Incident
CBA	Cost-Benefit Analysis
CDC	Centers for Disease Control and Prevention
CNO	Chief of Naval Operations
DOD	Department of Defense
DON	Department of the Navy
HRBS	Health Related Behaviors Survey
LDO	Limited Duty Officer
LSO	Landing Safety Officer
MCPON	Master Chief Petty Officer of the Navy
OPNAVINST	Office of the Chief of Naval Operations Instruction
RAN	Royal Australian Navy
SIDS	Sudden Infant Death Syndrome
USNA	United States Naval Academy
WO	Warrant Officer



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## I. INTRODUCTION

With the ever-advancing technology of U.S. naval vessels and weapon systems, the U.S. Department of Navy (DON) prohibits the consumption of alcohol on U.S. naval vessels while in-port and underway at sea (Office of the Chief of Naval Operations [CNO], 2015, p. 6). In conjunction, it routinely conducts alcohol awareness campaigns directed at encouraging military personnel to drink responsibly. However, 42.7% of U.S. sailors admitted during the 2018 Department of Defense (DOD) Health Related Behaviors Survey (HRBS) to binge drinking, while 13.6% admitted to heavy drinking. Additionally, 29.0% also agreed that the military has a culture supportive of drinking (Meadows et al., 2021, p. 78-80). Negative consequences, such as “lost productivity, accidents, disability, early death, crime, neglect of family responsibilities, and personality deterioration,” are associated with alcohol misuse (Cook et al., 2000, p. 1629). Not only can alcohol misuse be detrimental to U.S. sailors’ lives, it can also divert commands’ resources away from operational readiness. This disruption overall impairs the U.S. Navy’s ability to effectively support operations due to manning issues and lost man hours caused by health issues and alcoholic-related incidents (ARIs). With alcohol misuse a constant concern for the DON, my research attempts to understand the preferences and views of U.S. naval officers regarding different alcohol policies and what they believe would best promote responsible alcohol consumption among U.S. sailors. In doing so, my research answers: What are the preferences and views of U.S. naval officers at Naval Postgraduate School (NPS) regarding the current DON’s alcohol policy?

Although the DON is composed of both the U.S. Navy and the U.S. Marine Corps, I focus specifically on preferences and views of the alcohol policy in relationship to the U.S. Navy for this thesis. While NPS students are not representative of the population of naval officers, those assigned to NPS are set to rotate into increased leadership roles and potentially command of such naval vessels. As such, their preferences and views are important to consider in designing an effective alcohol policy. I utilized a survey of 154 U.S. naval officers at NPS as my primary data source. Participants were required to be U.S. naval officers in residence at NPS who had been previously assigned to or embarked



onboard a U.S. naval vessel. Having been underway for at least one deployment was beneficial but not an eliminating factor. The survey results identify non-biased inputs regarding individual preferences and views with regards to alcohol on U.S. naval vessels. I consider these inputs as non-biased in the sense that they are from individuals who have transferred to NPS from a variety of naval backgrounds (i.e., career fields, naval vessels, commands, locations, etc.). Additionally, the results identify other aspects for policy decision makers to consider when incorporating effective policies regarding responsible alcohol consumption, even to go as far as allowing alcohol aboard U.S. naval vessels.

My thesis contributes to a growing body of literature from DOD-funded research institutions that document alcohol behavior in the military (e.g., Bray et al. [2009], Barlas et al. [2013], Defense Health Agency [2015], Meadows et al. [2018], and Meadows et al. [2021]). It also contributes to a small body of literature from academia that documents alcohol behavior in the U.S. Navy (e.g., Moore et al. [2007] and Harbertson et al. [2016]). In contrast to previous research, I used a specific group of individuals (U.S. naval officers) unique to a specific aspect of a complex organization (alcohol on U.S. naval vessels).

The primary finding from this survey revealed that 81.81% of survey participants would prefer an alcohol policy that allowed alcohol on U.S. naval vessels to a greater extent than presently. 66.23% preferred alcohol allowance both in port and underway, while 15.58% preferred it in port only. Overall, my research findings led me to the conclusion that there is a differentiation between U.S. naval officers' preferences and views versus policy makers' overall outlook on its alcohol policy. Additional survey sampling would be beneficial in reducing uncertainty, and further policy evaluation would be necessary to be conducted via a Cost-Benefit Analysis (CBA) comparing which alcohol policy would best promote responsible alcohol consumption among U.S. sailors.

The remaining chapters of my thesis are organized as follows. In the following chapter, I conducted a literature review of what alcohol is, its health effects related to misuse, its legality at the federal level, the DON's current alcohol policy, foreign navies' alcohol policies, the history and culture of alcohol in the U.S. Navy, current U.S. sailors' alcohol behaviors, the availability of alcohol to U.S. sailors, and media coverage of U.S. sailors' misuse. In the third chapter, I presented my survey and its design that was



distributed to NPS students who are specifically U.S. naval officers. In the fourth chapter, I present the survey results, findings, and limitations. In the fifth and final chapter, I conclude with my recommendation and future research.



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## II. BACKGROUND AND LITERATURE REVIEW

Alcohol, whether officially or unofficially, has been a part of the U.S. Navy since its establishment and adaptation from Great Britain's Royal Navy during the American Revolutionary War. It was not until July 1, 1914, when the Department of the Navy prohibited the consumption of alcohol on U.S. naval vessels. Advocating this policy, Secretary of the Navy Josephus Daniels signed General Order 99 (Prohibition in the Navy) on June 1, 1914, directing:

On July 1, 1914, Article 827, Naval Instructions, will be annulled and in its stead the following will be substituted: The use or introduction for drinking purposes of alcoholic liquors on board any naval vessel, or within any navy yard or station, is strictly prohibited, and commanding officers will be held directly responsible for the enforcement of this order. (Naval History and Heritage Command, 2014, p. 1)

With this order, the Department of the Navy's alcohol policy shifted dramatically from past policy. In a speech he gave to the Board of Temperance, Prohibition and Public Morals of the Methodist Episcopal Church in Washington, D.C., on December 17, 1918, Secretary Daniels (1919) summarized his motives for prohibiting alcohol in the U.S. Navy. He stated:

There were many reasons given for it at the time, but nearly all those explanations were wrong. It was issued, of course, solely because temperance is the only sure method to efficiency, and my ambition was that the American Navy, whether it be large or whether it be small — no matter what its size should be the most efficient and most powerful navy afloat. (p. 302)

Shortly thereafter General Order 99's implementation, additional measures went as far as "establishing dry zones, five miles in width, around U.S. naval installations" (Navy History and Heritage Command, 2017, p. 1). One hundred and eight years later, the Department of the Navy has since relaxed its stance on its alcohol policy ashore to allow for its permissance. However, onboard U.S. naval vessels, whether in port or underway, it is still strictly prohibited with limited exceptions. In this literature review, I examine what alcohol is, its associated health effects from misuse, its legality, its history and culture in the U.S. Navy, U.S. sailors' alcohol behavior and their accessibility to alcohol, the negative media coverage associated with misuse, and a possible explanation for alcohol misuse



among sailors. I also briefly review the DON' current alcohol policy, along with a couple of other foreign navies' alcohol policies.

## **A. WHAT IS ALCOHOL**

Alcohol has multiple forms (i.e., beer, wine, liquor, and malt liquor). According to the Centers for Disease Control and Prevention (CDC), through the process of fermentation, alcohol is formed with the intoxicating ingredient of ethyl alcohol, or more simply known as ethanol (2022, para. 1). When consumed, alcohol (to include ethanol) is metabolized by enzymes in the liver (CDC, 2022, para. 1). However, the liver has a limited capacity in metabolizing alcohol. It can only metabolize a small amount of alcohol at a time, leaving the excess alcohol to be rapidly absorbed from the stomach and small intestine into the bloodstream, which circulates throughout the body (CDC, 2022, para. 2). Alcohol is a central nervous system depressant. The severity of intoxication is dependent on multiple factors, to include body composition, type of alcohol consumed, amount consumed, and the timeframe in which it was consumed (CDC, 2022, para. 2).

## **B. HEALTH EFFECTS OF ALCOHOL AND ITS MISUSE**

Researchers differ on whether low to moderate alcohol consumption is beneficial or harmful. Consequently, it is only proper to acknowledge that “the relation between alcohol consumption and health outcomes is complex and multidimensional” (Room, 2005, p. 519). As previously stated, the effects and severity of alcohol depends on body composition, alcohol type, amount, and consumption timeframe (CDC, 2022, para. 2).

Unlike the debate on low to moderate alcohol consumption, the health effects of alcohol misuse are substantial. Alcohol misuse, i.e., heavy drinking and binge drinking, is associated with chronic diseases, various cancers, high blood pressure, psychological disorders, unintentional injuries, violence, and other alcohol use disorders (CDC, 2022, para. 10). For pregnant women, excessive alcohol has additional negative effects to the developing fetus, such as fetal alcohol spectrum disorders, and potentially the child later in infancy, such as sudden infant death syndrome (SIDS) (CDC, 2022, para. 10). Additionally, as stated in the *Handbook of Health Economics* by economists, Philip J. Cook and Michael J. Moore, “excess drinking is associated with lost productivity, disability,



early death, crime, neglect of family responsibilities, personality deterioration, and other problems” (Cook et al., 2000, p. 1631).

### **C. LEGALITY OF ALCOHOL IN THE U.S.**

Overarching, at the federal level of government, the consumption of alcohol is legal. However, it has been illegal in the past for a brief period. The 18<sup>th</sup> Amendment, Prohibition of Liquor, was passed by Congress on December 18, 1917, and ratified by the states on January 16, 1919. Enforcement for it was provided by Congress through the Volstead Act, which was passed on October 28, 1919 (National Constitution Center, n.d., p. 1).

Alcohol prohibition in the United States was short lived with its eventual repeal by the 21st Amendment on December 5, 1933 (Library of Congress, n.d., p. 1). As one historian, Jack Blocker, wrote: “The conclusive proof of Prohibition’s failure is, of course, the fact that the Eighteenth Amendment became the only constitutional amendment to be repealed” (Blocker, 2006, para. 3). With the short duration of U.S. prohibition, it is worthy to note that Secretary Daniels’ order was issued before the 18<sup>th</sup> Amendment and has remained active since the 21<sup>st</sup> Amendment.

### **D. DON’S ALCOHOL POLICY RELATED TO THE U.S. NAVY**

Per Office of the Chief of Naval Operations Instruction 5350.4E, *Navy Alcohol and Drug Misuse Prevention and Control Instruction*, U.S. sailors’ alcohol misuse is “absolutely incompatible with the maintenance of high performance standards, individual professionalism, personal readiness, military discipline and most importantly, Navy mission accomplishment” (Office of the Chief of Naval Operations [CNO], 2022, p. 1-1). As such, OPNAVINST 1700.16B, *Alcoholic Beverage Control*, prohibits the consumption of alcohol on U.S. naval vessels while in port and underway at sea (Office of the Chief of Naval Operations [CNO], 2015, p. 6). In port, if sailors choose to consume alcohol, they must leave their respective vessels to do so. For some, that entails not just leaving their workplace but their home. Underway at sea, sailors cannot consume alcohol onboard, which can include lengthy deployments ranging from six to nine months with the only



exceptions being the occasional “beer day” awarded after 45-days of continuous underway or for an official event (CNO, 2015, p. 7).

Combined, these instructions restrict U.S. sailors to only consume alcohol during brief port visits and while in homeport, but not while on their respective vessels. These restrictions, compounded with an unofficial drinking history and culture, create a “happy hour” type effect for U.S. sailors to binge drink and to drink heavily when able to do so (before/after deployment and during port visits) before they are prohibited (underway/deployment). This alcohol misuse can lead to chronic drinking behaviors and potentially lead to ARIs during “beer days,” official events, port visits, and while in their respective homeports.

## **E. FOREIGN NAVIES’ ALCOHOL POLICIES**

Although the U.S. Navy prohibits alcohol consumption onboard U.S. naval vessels, some foreign navies do allow for alcohol consumption aboard their respective vessels such as the Royal Australian Navy (RAN) and the United Kingdom (U.K.) Royal Navy. For both the Australian and U.K. policies, authorized use of alcohol is permitted onboard their naval vessels within a specific period and with exceptions to certain job specialties. Each policy has limitations to alcohol consumption and is ultimately entrusted to the naval vessels’ commanding officers’ discretion.

### **1. Royal Australian Navy (RAN)**

In the RAN, alcohol use is “governed by their Chief of Navy (CN) in his Instrument of Determination under subsection 123A of the Defence Act 1903” (Australian Government – Department of Defense, 2013, p. IH-1). It states:

Alcohol may only be consumed on Service land within that area of a mess, canteen or club set aside for the consumption of alcohol, or at places authorised by the Commanding Officer. A Navy member may only be in possession of alcohol in areas authorized for its consumption or storage. (p. IH-1)

When at sea, the sale and consumption of alcohol is limited. It states:





Officers and senior sailors in command or charge positions are not to drink in a vessel under way. The detailed conditions for the operations of bars and the sale of alcohol in HMA Ships, including additional conditions concerning quantities of alcohol to be sold and the duration and frequency of bar opening hours in vessels at anchor or in harbour, must be specified by Commander Australian Fleet and included in individual ship's orders and must be in accordance with the CN's Instrument of Determination under subsection 123A of the Act. (Australian Government – Department of Defense, 2013, p. IH-1)

## **2. United Kingdom (U.K.) Royal Navy**

The U.K. Royal Navy alcohol policy allows the purchase and consumption of beer, wines and spirits by senior and junior ratings on board Royal Navy ships (Command of the Defense Council, 2017, pp. 80–4–80-5). Its policy is more closely aligned with its nation's "domestic legislation and engenders a professional but pragmatic approach to alcohol consumption and culture. It is not designed to constrain personal freedom nor erode privilege, but it does re-emphasise the need for a mature and responsible approach to alcohol" (Command of the Defense Council, 2020 p. 21J-13). In addition, the U.K. Royal Navy also understands that a naval vessel "is as much a home as it is a place of work and therefore an opportunity for responsible drinking remains an appropriate element of being able to relax in accordance with existing policies covering safety critical duties" (United Kingdom Royal Navy, 2021). In conjunction, its leadership acknowledges that U.K. Royal Navy "reflects society at large and inevitably includes personnel who will drink to excess on occasion" (Command of the Defense Council, 2020, p. 21J-5). Their alcohol policy has increased limitations for sailors who are assigned to safety critical duties and billets.

## **F. HISTORY OF ALCOHOL IN THE U.S. NAVY**

While the U.S. Navy does not officially endorse a culture of alcohol consumption, there is an unofficial culture that thrives within both the enlisted and officer ranks. It is deep-rooted in tradition stemming from the U.K. Royal Navy and their own storied past. Following the American Revolutionary War, with the creation of the U.S. Navy, the U.S. Congress established a daily ration of "one half-pint of distilled spirits" or "in lieu thereof, one quart of beer" for sailors on March 27, 1794 (Navy History and Heritage Command, 2017, p. 1).



According to the Navy History and Heritage Command, from 1794 to 1914, alcohol was allowed on U.S. naval vessels in some form or fashion. During this period, the U.S. Navy's position on alcohol fluctuated back and forth multiple times. In 1831, to accommodate sailors who did not want to partake in consuming alcohol, an alternative was established. In exchange for forgoing their alcohol ration, sailors received a cash payment of six cents per day. The specific amount fluctuated from six cents to three cents in 1847 and back up to four cents in 1848. In 1851, this alternative was limited to only officers and their respective attendants, which was later reversed in 1853. With the onset of the American Civil War, the alcohol ration was discontinued in 1862, and alcohol was temporarily banned from all naval vessels. In 1864, alcohol was considered privates stores and, once again, allowed to come aboard naval vessels, if sanctioned by the commanding officer. In 1893, officers' wine messes were authorized. In 1899, the sale or issue of alcohol to enlisted sailors from the officers' wine messes was prohibited. This history of alcohol allowance continued aboard U.S. naval vessels until Secretary Daniels' General Order 99 (Navy History and Heritage Command, 2017, p. 1).

During wartime, U.S. naval personnel would come up with creative ways to consume alcohol, whether in port or underway. Although limited in publication, one example is that of the famed submarine commander, CDR Eugene Fluckey, using his allotted depth-charge rations during World War II as a morale boost for his crew of the USS Barb after sinking enemy ships. CDR Fluckey wrote that he once told a crew member:

Listen carefully, because this is not legal. Our crew of 23-year-olds definitely do not enjoy our Schenley 'Black Death' depth-charge ration, which I use to celebrate our sinkings. So, I have convinced the submarine base welfare officer who controls the beer ration for ships' parties to loan me 24 cases of beer until the Barb returns to Pearl in about six months and has a party. When we sink a ship, we'll have beer. (Fluckey, 1992, p. 72)

USS Barb, itself, would be remembered as one of the famed submarines regarding tonnage sunk during WWII.

Even during the early years of the Cold War, alcohol was utilized as a motivational tool. The Commander in Chief of the Atlantic Fleet, Admiral Jerauld Wright, promised a



case of whiskey to the first U.S. naval vessel to force the surfacing of a [Soviet] submarine. He even displayed this proclamation outside of his office. It read:

Whereas, the presence of unidentified submarines in the approaches to the United States has been frequently reported, and

Whereas, the submarines have been uncooperative in declaring either their identity or their intent as is required by the customs and usages of honorable seamen, and

Whereas, tangible evidence that these surreptitious operations are being conducted would result in appropriate embarrassment to those involved.

Therefore, I do hereby pledge to donate one case of Jack Daniels Old No. 7 Brand of Quality Tennessee Sour Mash Corn Whiskey, made as our fathers made it for seven generations at the oldest registered whiskey distillery in the United States, established 1866, to the first Scene of Action Commander in the Atlantic who produces evidence that a “non U.S. or known friendly” submarine has been worn out. (Sherry & Drew, 1998, p. 41)

It was not until 1980 for an exception to the policy to be made. The Secretary of the Navy at the time, Edward Hidalgo, made the decision to allow sailors “that had been out to sea for an extended period to each have two beers (later set to 45 continuous days)” (U.S. Naval Institute News (USNI News, 2014, n.p.). This decision was apparently “prompted by Hidalgo’s experience on USS Enterprise during World War II when a kamikaze attack plane crashed through an elevator and destroyed the cargo of beer” (USNI News, 2014, n.p.).

## G. CULTURE OF ALCOHOL IN THE U.S. NAVY

Accessing the U.S. Navy’s unofficial march song, *Anchors Aweigh*, one can see a change in lyrics relating to alcohol. It was originally written by a midshipman at the United States Naval Academy, Alfred H. Miles, in 1906, which preceded General Order 99. The original lyrics were:

Verse 1  
Stand Navy down the field  
Sails set to the sky  
We’ll never change our course  
So Army you steer shy-y-y-y  
Roll up the score, Navy  
Anchors Aweigh



Sail Navy down the field  
And sink the Army, sink the Army grey!

Verse 2

Get under way, Navy  
Decks cleared for the fray  
We'll hoist true Navy Blue  
So Army down your grey-y-y-y  
Full speed ahead, Navy  
Army heave to  
Furl Black and Grey and Gold  
And hoist the Navy, hoist the Navy Blue!

These lyrics are that of a student's pride in their school and against their school's rival, the United States Military Academy. Again, it is noteworthy that these lyrics were written prior to Secretary Daniels' General Order 99 in 1914. However, a third verse was added by a George D. Lottman in 1926, which was after the Navy's instillment of alcohol prohibition. The added verse was:

Verse 3

Anchors Aweigh, my boys, Anchors Aweigh.  
Farewell to college joys, we sail at break of day-ay-ay-ay.  
Through our last night on shore, drink to the foam,  
Until we meet once more:  
Here's wishing you a happy voyage home.

The specific line to take notice is "Through our last night on shore, drink to the foam." The song's lyrics were revised in 1997 by then Master Chief Petty Officer of the Navy (MCPON) John Hagen to be more representative of the Navy as a whole and not just the USNA. The revised lyrics were:

Verse 1

Stand Navy out to sea,  
Fight our battle cry;  
We'll never change our course,  
So vicious foe steer shy-y-y-y.  
Roll out the TNT,  
Anchors Aweigh.  
Sail on to victory  
And sink their bones to Davy Jones, hooray!

Verse 2

Anchors Aweigh, my boys,



Anchors Aweigh.  
Farewell to foreign shores,  
We sail at break of day-ay-ay-ay.  
Through our last night ashore,  
Drink to the foam,  
Until we meet once more.  
Here's wishing you a happy voyage home.

Verse 3  
Blue of the mighty deep:  
Gold of God's great sun.  
Let these our colors be  
Till all of time be done, done, done, done.  
On seven seas we learn  
Navy's stern call:  
Faith, courage, service true,  
With honor, over honor, over all.

Of notice, "Through our last night ashore, Drink to the foam" is still present, although not in Verse 3, but in Verse 2 now (United States Naval Academy, n.d., p. 1). Anchors Aweigh is played and sung at patriotic events to include graduations welcoming new sailors (both recruits and officers) into the ranks. This subtle cue is a glamorization of alcohol consumption preceding getting underway. As Dr. Judith Harbertson wrote in her research regarding pre-deployment alcohol misuse among shipboard naval personnel, "the pre-deployment period could present a particular risk for alcohol misuse among personnel anticipating the absence of alcohol" (Harberston, 2016, p. 185).

Although alcohol has been mostly removed from official functions, it is still present at unofficial functions, from 'wetting downs' to 'hails and farewells.' For some individuals, 'wetting down' is a celebration of promotion in which the individual recently promoted purchases alcohol for the attendees with the pay difference between the previous and new rank. 'Hails and farewells' are the customary of welcoming new personnel to a command or organization, while at the same time, bidding farewell to departing personnel. Typically, these events and other socials outside of work hours take place at bars, breweries, or any venue that primarily serves alcohol. Even more blatantly, at one time in the aviation community, a tradition of 'bottle bets' was the standard practice. A 'bottle bet' is between Landing Safety Officers (LSOs) and junior aviators during carrier qualifications. The LSOs



would evaluate junior aviators “regarding a variety of landing criteria, from hitting the correct target wire to catching it on their initial hook-down pass;” and if they “didn’t hit the marks, they ‘d owe their LSO a bottle of booze” (Ziezulewicz, 2019). This tradition gained senior leadership’s attention and has since been prohibited (Ziezulewicz, 2019).

## **H. CURRENT ALCOHOL BEHAVIOR AMONG U.S. SAILORS**

The Department of Defense (DOD) promotes research and seeks a deeper understanding of service members’ health, health-related behaviors, and overall well-being through the DOD Health Related Behaviors Survey (HRBS). The DOD HRBS is conducted approximately every three years. It assesses a variety of health-related behaviors: substance use (including alcohol use), mental and physical health, sexual behavior, and post-deployment problems. These topic areas are important to DOD leadership due to their potentially negative effects on an individual’s ability to meet the strenuous demands of military life and, overall, force readiness. (Meadows, 2021, p. iii)

For this thesis, I focused on the sections relating to substance use, specifically alcohol use. In reviewing HRBS reports from 2008, 2011, 2014, 2015, and 2018, I consolidated overall percentages for binge drinking (Table 1) and for heavy drinkers/drinking (Table 2) specific to the U.S. Navy. Due to changing methodology (question and response design) for each of the HRBS, it is not proper to compare them to each other, but only to acknowledge them to their respective report years. However, the consolidation of overall percentages from the DOD HRBSs has identified relatively consistent alcohol misuse rates for approximately the past two decades.



Table 1. HRBS: Binge drinking, U.S. Navy, 1998–2018

Year	Overall Percentage
1998	32.0%
2002	44.0%
2005	42.0%
2008	48.0%
2011	36.1%
2014	*34.0%
2015	34.2%
2018	42.7%

\*Overall percentage for HRBS 2014 is inclusive of all service branches.

Adapted from (Bray et al., 2009, p. 53), (Barlas et al., 2013, p. 97), (Defense Health Agency, 2015, p. 5), (Meadows et al., 2018, p. 85), (Meadows et al., 2021, p. 75)

Table 2. HRBS: Heavy alcohol use/drinking, U.S. Navy, 1998–2018

Year	Overall Percentage
1998	13.0%
2002	19.0%
2005	17.0%
2008	18.0%
2011	9.4%
2014	*11.1%
2015	6.0%
2018	13.6%

\*Overall percentage for HRBS 2014 is inclusive of all service branches.

Adapted from (Bray et al., 2009, pp. 47–48), (Barlas et al., 2013, p. 97), (Defense Health Agency, 2015, pp. 3–4), (Meadows et al., 2018, p. 85), (Meadows et al., 2021, p. 75)

The 2018 DOD HRBS is the most recent and was conducted by the RAND Corporation. In its report, the RAND Corporation stated, “decades of research with military populations have demonstrated that heavy alcohol use is also problematic in military populations, with both active-duty and separated military populations reporting high rates of alcohol use disorder and resulting negative consequences” (Meadows, 2021, p. 74). Overall, the survey revealed that 34% of all U.S. service members were current binge drinkers, compared to 26.5% in the general population. It also revealed that 9.8% were current heavy drinkers, compared to 8.9% in the general population. (Meadows, 2021, pp.



75–76) Although these percentages include service members from all branches, the U.S. Navy had comparably higher rates among the branches: binge drinking at 42.7% and heavy drinking at 13.6%. (Meadows, 2021, p. 78) Once adjusted for differences in survey methodologies, compared to the 2015 DOD HRBS, 2018 rates had increased significantly. (Meadows, 2021, p. 77)

In addition to these rates of binge drinking and heavy drinking, the 2015 and 2018 DOD HRBSs also sought to identify perceptions to the possible culture of said alcohol misuse. For the 2015 DOD HRBS, survey results revealed that 67.0% of U.S. sailors agreed with statements that alcohol consumption was glamorized by military culture and even supported by leadership. (Meadows et al., 2018, p. 92). For 2018 DOD HRBS, survey results revealed that only 29.0% agreed to a military culture supportive of drinking (Meadows, 2021, p. 80). The difference between 2015 percentage of 67.0% and 2018 percentage of 29.0% is due to the scales not being directly comparable to each other; “items and response scale were modified” (Meadows et al., 2021).

## **I. ACCESSIBILITY OF ALCOHOL TO U.S. SAILORS**

Whether on-base or off-base, alcohol is readily accessible to U.S. sailors of legal drinking age when off-duty. On-base Navy Exchanges (NEX) provide sailors with the opportunity to purchase alcohol at lower, if not discounted, prices. This physical availability of alcohol facilitates its social availability to others, including underage sailors. As a result, alcohol consumption becomes the recreational activity for most junior sailors. (Moore, 2007, para. 29)

However, if the government discontinued the sale of alcohol on bases, the availability of alcohol to sailors is still available off-base. It is available from businesses that sell alcohol with special promotions to attract sailors to their establishments. Surrounding most naval bases are clusters of bars, nightclubs, and liquor stores to monopolize on the concentration of sailors who want to decompress from a stressful environment. (Moore, 2007, para. 29)

The purchasing habits of U.S. sailors was accessed in the 2015 DOD HRBS. As seen in Figure 1, 44.9% of U.S. sailors “mainly purchased alcohol off base,” 27.5%





“mainly purchased alcohol on base,” and the remaining 27.5% “purchased alcohol equally on and off base” (Meadows et al., 2018).

Figure 1. 2015 DOD HRBS Table 5.13. Source: Meadows et al. (2018).

Military Drinking Culture, On-Base Alcohol Purchases, and Perceived Supervisor Attitudes Toward Alcohol Use, by Service Branch						
	Total (1)	Air Force (2)	Army (3)	Marine Corps (4)	Navy (5)	Coast Guard (6)
Military culture supportive of drinking	68.2% (66.8–69.7)	65.3% <sup>c,e</sup> (63.2–67.4)	69.2% <sup>e</sup> (66.3–72.1)	74.1% <sup>a,d,e</sup> (70.6–77.6)	67.0% <sup>c,e</sup> (64.2–69.9)	60.1% <sup>a,b,c,d</sup> (58.5–61.8)
Mainly purchased alcohol on base	37.6% (35.8–39.4)	40.2% <sup>d,e</sup> (37.8–42.7)	43.3% <sup>d,e</sup> (39.6–47.1)	41.0% <sup>d,e</sup> (36.5–45.5)	27.5% <sup>a,b,c,e</sup> (24.4–30.6)	14.7% <sup>a,b,c,d</sup> (13.4–16.0)
Mainly purchased alcohol off base	38.3% (36.5–40.0)	34.6% <sup>d,e</sup> (32.3–36.9)	35.4% <sup>d,e</sup> (31.9–39.0)	33.6% <sup>d,e</sup> (29.5–37.7)	44.9% <sup>a,b,c,e</sup> (41.4–48.4)	66.3% <sup>a,b,c,d</sup> (64.5–68.0)
Purchased alcohol equally on and off base	24.1% (22.6–25.7)	25.2% <sup>e</sup> (23.1–27.3)	21.2% <sup>d</sup> (18.2–24.3)	25.4% <sup>e</sup> (21.4–29.4)	27.5% <sup>b,e</sup> (24.3–30.7)	19.1% <sup>a,c,d</sup> (17.6–20.5)
Supervisor does not discourage alcohol use	42.4% (40.9–44.0)	48.8% <sup>c,d,e</sup> (46.6–51.0)	43.8% <sup>d,e</sup> (40.5–47.0)	38.6% <sup>a</sup> (34.7–42.6)	37.2% <sup>a,b</sup> (34.2–40.3)	37.1% <sup>a,b</sup> (35.5–38.8)
Supervisor somewhat discourages alcohol use	38.7% (37.1–40.2)	34.5% <sup>c,d,e</sup> (32.3–36.6)	35.0% <sup>c,d,e</sup> (31.9–38.2)	44.8% <sup>a,b</sup> (40.7–48.9)	44.3% <sup>a,b</sup> (41.1–47.4)	42.8% <sup>a,b</sup> (41.1–44.5)
Supervisor strongly discourages alcohol use	18.9% (17.6–20.2)	16.7% <sup>b,e</sup> (15.1–18.3)	21.2% <sup>a</sup> (18.5–23.9)	16.5% (13.5–19.6)	18.5% (16.1–21.0)	20.1% <sup>a</sup> (18.7–21.5)

NOTE: All data are weighted. 95-percent confidence intervals are presented in parentheses.

<sup>a</sup> Estimate is significantly different from the estimate in column 2 (Air Force).

<sup>b</sup> Estimate is significantly different from the estimate in column 3 (Army).

<sup>c</sup> Estimate is significantly different from the estimate in column 4 (Marine Corps).

<sup>d</sup> Estimate is significantly different from the estimate in column 5 (Navy).

<sup>e</sup> Estimate is significantly different from the estimate in column 6 (Coast Guard).

With this data set, the accessibility of alcohol to U.S. sailors is more likely to be purchased off base where military oversight is extremely reduced. Unfortunately, a trend could not be identified due to similar data not being collected in the previous surveys or the more recent 2018 DOD HRBS.

## J. MEDIA COVERAGE OF ALCOHOL MISUSE

Whether stateside or abroad, U.S. sailors’ alcohol misuse can have negative impacts on public relationships with the local community and/or host nation. Alcohol misuse among U.S. service members has resulted in negatively gained media coverage. Two examples received extensive media coverage in Japan and the U.S. In 2016, the U.S. Navy “banned its sailors on the Japanese island of Okinawa from drinking alcohol, both on and off base, and placed tight restrictions on their movement after a sailor was arrested on suspicion of drunken driving” (Fifield, 2016). Again, in 2017, the service members in Japan



were banned from drinking alcohol after a fatal crash involving Japanese nationals and a U.S. Marine. Additionally, the service members stationed on mainland Japan were also banned from drinking alcohol, both on and off base. (Fifield, 2017) Indirectly, these incidents and their resulting media coverage created animosity between the U.S. and allies. Both incidents in this case “fueled public anger about the U.S. bases in Okinawa and the crimes and accidents that are associated with them” among Japanese nationals (Fifield, 2017). However, neither incident involved a U.S. sailor that was actively assigned to or embarked on a U.S. naval vessel at the time. Both individuals were at shore assignments.

#### **K. POSSIBLE EXAMPLE OF PSYCHOLOGICAL REACTANCE**

The U.S. Navy is a rule intensive environment. A sailor has policies, procedures, rules, regulations, and standards that they are required to follow. Some basic examples include uniform regulations, grooming standards, socialization/fraternization rules, etc. Sailors are told where to be and when to be there. Alcohol consumption is no exception. With that, is sailors’ alcohol use/misuse a possible example of psychological reactance?

The theory of psychological reactance was first developed in 1966 by an American psychologist, Jack Brehm, who has since written multiple books and articles regarding the topic. In his 1981 book, *Psychological Reactance – A Theory of Freedom and Control*, he states that the “motivational state (psychological reactance) will manifest itself” when “freedoms are threatened or lost” (p. 4). As such, the theory implies that “a threat to or loss of a freedom motivates the individual to restore that freedom ... the direct manifestation of reactance is behavior directed toward restoring the freedom in question” (p. 4). Even when a threatened or lost freedom cannot be restored, “reactance is aroused and has the consequence of making the lost option more desirable” (Brehm, 1981, p. 4).

Relating to Brehm’s research, U.S. sailors’ behaviors leading to alcohol misuse may be their reactance to regain an extremely restricted (threatened) freedom. Sailors’ alcohol abuse in the U.S. Navy is a possible example of psychological reactance. Psychological reactance might assist in explaining why sailors are so passionate to consume alcohol when available and allowed before/after deployments and during port visits.



### III. METHODOLOGY

Using a mixed method of qualitative and quantitative approaches, I explore the background of alcohol in the U.S. Navy in conjunction with understanding the preferences and views of U.S. naval officers at NPS to better promote responsible alcohol consumption among U.S. sailors. The qualitative analysis stemmed from a literature review, to include a brief look at other navies' alcohol policies. Through a survey, the quantitative analysis identifies and presents (in graphical form) preferences and views regarding current alcohol policy on U.S. naval vessels from naval officers who will potentially rotate into command leadership roles. Moreover, the survey identifies other aspects (main supports and concerns) to consider when incorporating effective policies regarding responsible alcohol consumption among U.S. sailors.

#### A. SURVEY DESIGN

This research problem affects all U.S. sailors, whether afloat or ashore. It has a significantly more impactful effect on U.S. sailors assigned to or embarked on U.S. naval vessels. However, U.S. sailors' behaviors that are formed at afloat commands will transfer with them to their follow-on shore commands. This survey specifically addresses aspects associated with alcohol behaviors developed during afloat tour of duties.

As such, the research team thought it necessary to acquire feedback from experienced fleet personnel. This research team consists of the following individuals:

- Dr. Ryan Sullivan – Thesis Advisor, Associate Professor of Economics, Naval Postgraduate School
- (Myself) LCDR Philip Robinson, U.S. Navy – Student, Naval Postgraduate School

We developed a twenty-question survey. The data obtained from the sample population would need to be representation of the fleet. As such, we sought to utilize the U.S. naval officers of legal drinking age that were in-resident students at NPS. According to the NPS Institutional Research Office, the U.S. naval officers, including Limited Duty Officers



(LDOs) and Warrant Officers (WOs), at NPS represents a variety of community designators:

1. Unrestricted Line Officers
  - 111X – Surface Warfare Officer
  - 112X – Submarine Warfare Officer
  - 113X – Special Warfare Officer
  - 114X – Explosive Ordnance Disposal Officer
  - 131X – Naval Aviator
  - 132X – Naval Flight Officer
2. Restricted Line Officers
  - 120X – Human Resources Officer
  - 121X – Nuclear Propulsion Training Officer
  - 122X – Nuclear Engineering Officer
  - 123X – Permanent Military Professor
  - 144X – Engineering Duty Officer
  - 150X – Aerospace Engineering Duty Officer, Engineering or Maintenance
  - 151X – Aerospace Engineering Duty Officer, Engineering
  - 152X – Aerospace Engineering Duty Officer, Maintenance
  - 154X – Aviation Duty Officer
  - 171X – Foreign Area Officer
  - 180X – Meteorology/Oceanography Officer
  - 181X – Information Warfare Officer
  - 182X – Information Professional Officer
  - 183X – Intelligence Officer
  - 184X – Cyber Warfare Engineering Officer
3. Staff Corps Officers
  - 21XX – Medical Corps
  - 22XX – Dental Corps



- 23XX – Medical Service Corps
- 25XX – JAG Corps
- 27XX – Senior Health Care Executive Officer
- 29XX – Nurse Corps
- 31XX – Supply Corps
- 41XX – Chaplain Corps
- 51XX – Civil Engineering Corps

Due to the low quantity of survey participants that were LDOs or WOs, I did not find it necessary to breakdown their designators. Overall, all of the U.S. naval officers present at NPS bring knowledge and experience from their respective tours aboard U.S. naval vessels from across the globe to NPS. Additionally, after completing their advanced degree programs at NPS, these officers will rotate into billets with increased leadership responsibilities that may potentially include command one day.

The service-related inputs required that survey participants served onboard a U.S. naval vessel. Although not an eliminating factor, it was preferred that the individual had been aboard for at least one deployment. Through this approach, I hoped to identify non-biased inputs regarding current preferences and views with alcohol on U.S. naval vessels from a majority of mid-grade naval officers who will transition into command leadership roles or, at the very least, increased leadership roles. Moreover, the survey identified additional aspects to consider when incorporating effective policies regarding responsible alcohol consumption in the fleet. Aspects included participants' top criteria for developing an alcohol policy, participants' opinions on whether alcohol would increase or decrease alcohol misuse, and main support/concern for allowing alcohol onboard U.S. naval vessels.

Individuals participated voluntarily and anonymously. Questions and responses (to include the combining of questions and responses) that could be used to identify participants were intentionally made broad and given in ranges to promote individuals' privacy and to promote their participation in the survey. The first eight questions were demographical in nature: gender, age, rank, prior enlisted, service time, career field/



designation, ship served aboard, and number of deployments. The remaining twelve questions were regarding alcohol policy. See Appendix for survey.

## **B. ALCOHOL POLICY ALTERNATIVES**

The three policies our research team based our survey around, specifically survey question #11, were the current U.S. Navy alcohol control and prevention policy (the status quo), the RAN's alcohol policy (permittance in port only), and the U.K. Royal Navy's alcohol policy (permittance in port and underway). For both the Australian and U.K. policies, authorized use of alcohol is permitted onboard their naval vessels within a specific timeframe and with exceptions to certain job specialties.

### **(1) Status Quo / Current Alcohol Policy on U.S. Naval Vessels**

As briefly explained in this thesis' literature review, OPNAVINST 1700.16B, *Alcoholic Beverage Control*, prohibits the consumption of alcohol on U.S. naval vessels while in port and underway (CNO, 2015, p. 6). Exceptions to this policy is the occasional "beer day" awarded after 45-days of continuous underway or for an official event (CNO, 2015, p. 7). This is the current status quo.

### **(2) Permit Alcohol on U.S. Naval Vessels Only in Port**

An alternative to the status quo would be to permit alcohol on U.S. naval vessels only in port. This would be with limitations and at commanding officers' discretion. The RAN alcohol policy is more closely related to this category of alternative.

### **(3) Permit Alcohol on U.S. Naval Vessels in Port and Underway**

Another alternative to the status quo would be to permit alcohol on U.S. naval vessels in port and underway. Again, this would be with limitations and at commanding officers' discretion. The U.K. Royal Navy alcohol policy is more closely related to this category of alternative.



(4) Total Alcohol Prohibition

Another alternative to the status quo would be total alcohol prohibition. Our research team wanted to ensure that a more restrictive alternative was available to survey participants to choose from. This policy alternative would be aligned with Secretary Daniels' original General Order 99 from 1914.



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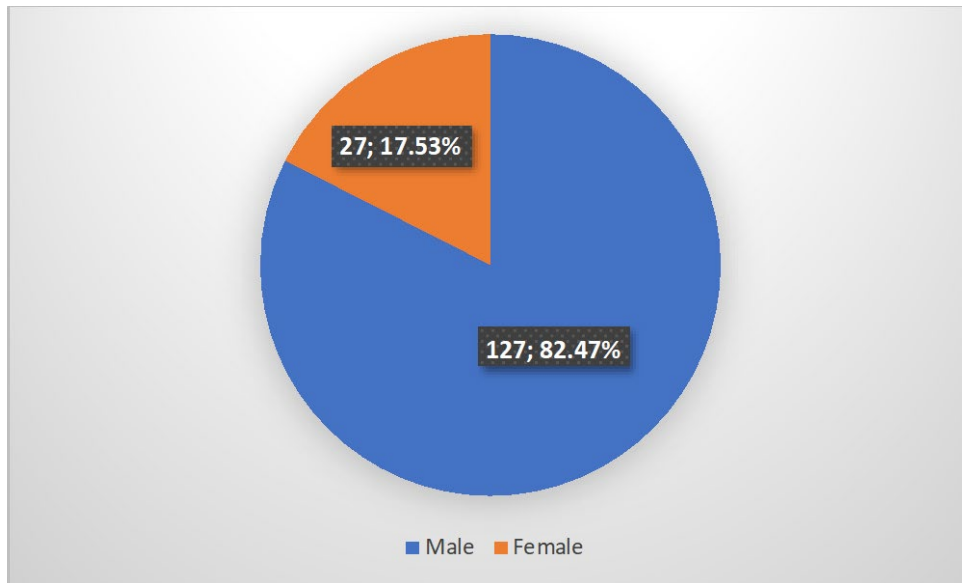


## IV. SURVEY RESULTS AND RESEARCH FINDINGS

During the 4<sup>th</sup> quarter of the 2022 academic year, the survey was distributed to all the U.S. naval officers who were in-resident students at NPS through its bulk email system. It was facilitated online through Qualtrics and was made available for a three-week period from 3–24 August 2022. According to the NPS Institutional Research Office, there were 553 U.S. naval officers enrolled during this period. Of those 553 individuals, 154 individuals actively participated in this anonymous survey in its entirety. This sample population represents 27.85% of all the U.S. naval officers at NPS. In the following subsections, Figures 2 through 7 and Tables 3 through 4 present the demographics of the sample population. Figures 8 through 23 and Table 5 present the main findings of the survey’s questions related to the DON’s alcohol policy. Survey results are as follow:

### A. DEMOGRAPHICS

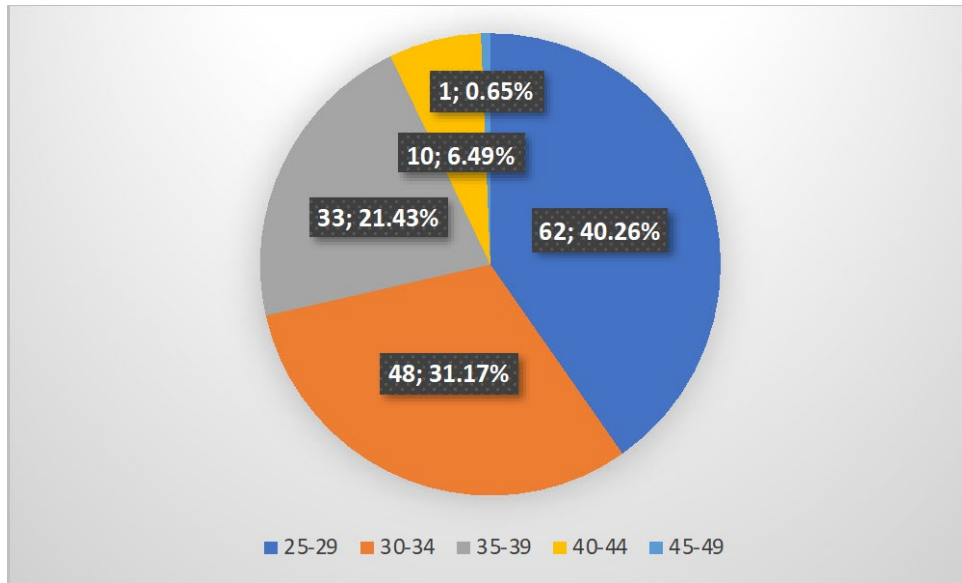
Figure 2. Survey Question #1: Gender.



The majority of survey participants were male (82.47%) versus female (17.53%).

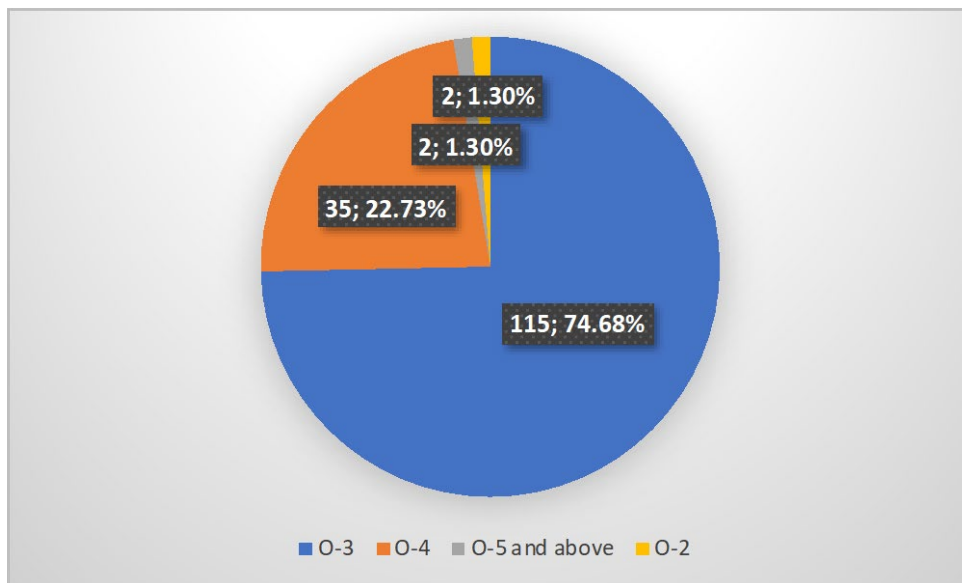


Figure 3. Survey Question #2: Age.



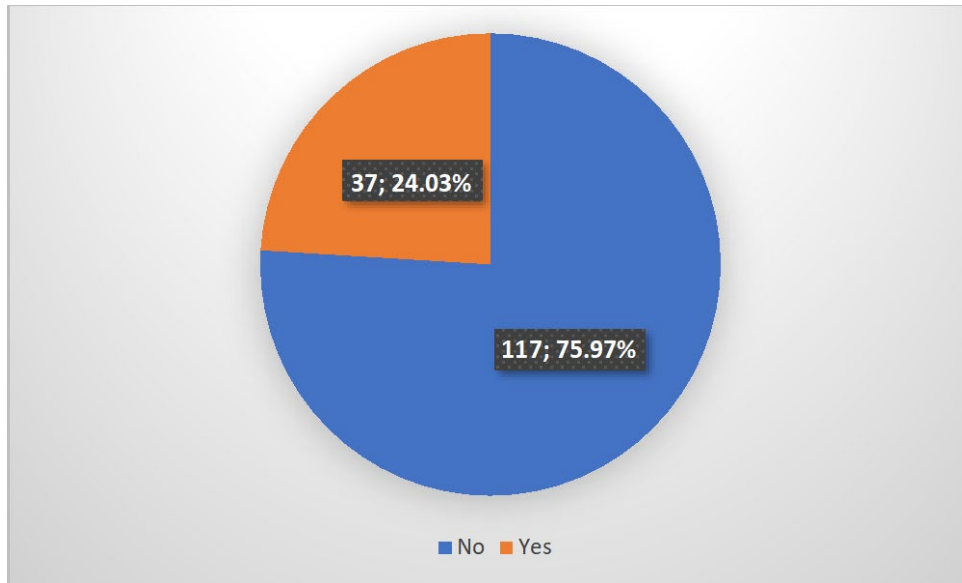
The majority of survey participants were age 25–29 (40.26%). The remaining participants were age 30–49. There were no responses for participants  $\leq 24$  and  $\geq 50$ .

Figure 4. Survey Question #3: What is your rank?



The majority of survey participants were O-3, Lieutenant, USN (74.68%). The next substantial rank was O-4, Lieutenant Commander, USN (22.73%). The remaining participants were equally O-2, Lieutenant Junior Grade, USN (1.30%) and O-5, Commander, USN and above (1.30%). There were no responses for O-1, Ensign, USN.

Figure 5. Survey Question #4: Are you prior enlisted?

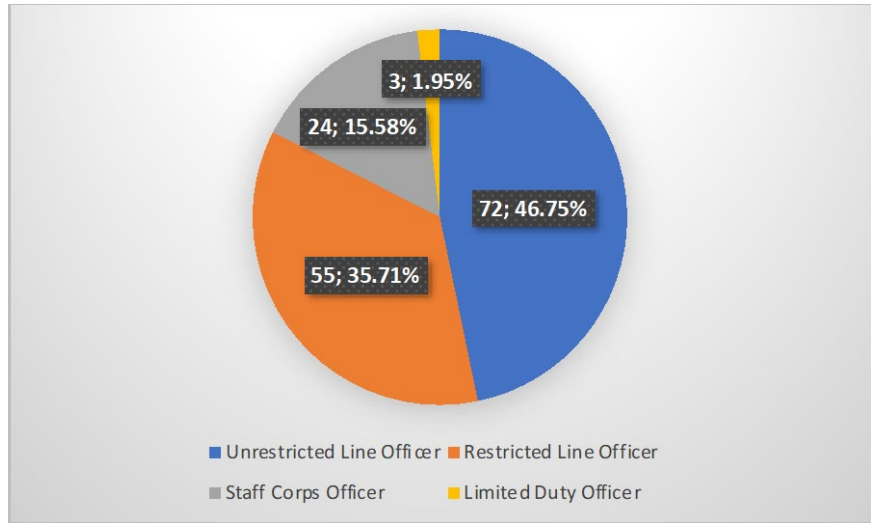


The majority of survey participants were not prior enlisted (75.97%) versus those that were prior enlisted (24.03%).

Table 3. Survey Question #5: How many years have you been in the U.S. Navy? (Only numbers may be entered in this field. Each answer must be between 0 and 40.)

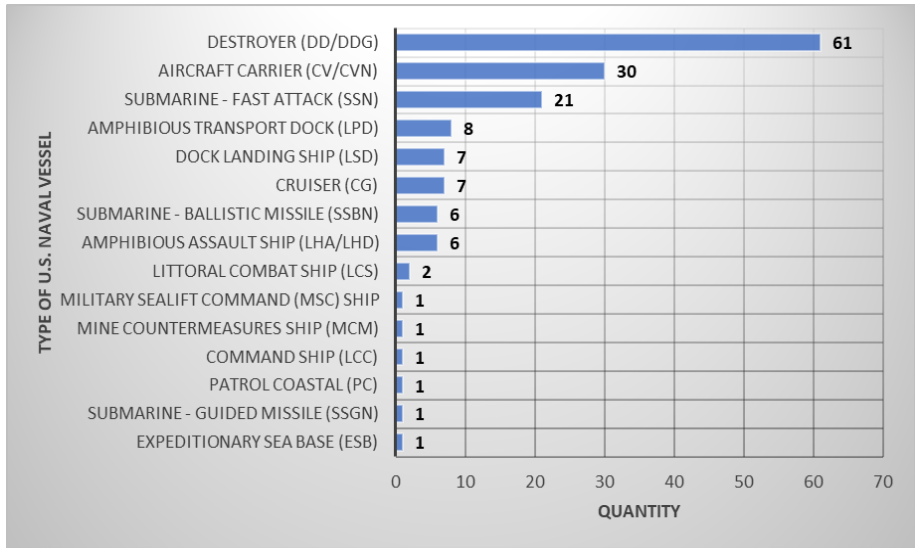
Maximum	25
Median	8
Minimum	3
Mean	9.669
Mode	6
Range	22
Standard Deviation	4.866

Figure 6. Survey Question #6: Select the appropriate category related to your designator (if your designator has changed while at NPS, please select category while assigned/embarked on a U.S. naval vessel).



The majority of survey participants were Unrestricted Line Officers (46.75%). The majority was followed second by Restricted Line Officers (35.71%), followed third by Staff Corps Officers (15.58%), and followed last by Limited Duty Officers (1.95%). There were no responses for Warrant Officer.

Figure 7. Survey Question #7: What type of U.S. naval vessel? (please select the type of vessel that you served on the longest as an officer)



The top three types of U.S. naval vessels served aboard by survey participants were: Destroyers (DD/DDG) at 39.61%, Aircraft Carriers (CV/CVN) at 19.48%, and Submarines – Fast Attack at 13.64%. There were no responses for Submarine Tenders (AS), Frigates (FF/FFG), Hospital Ships (T-AH), and Other.



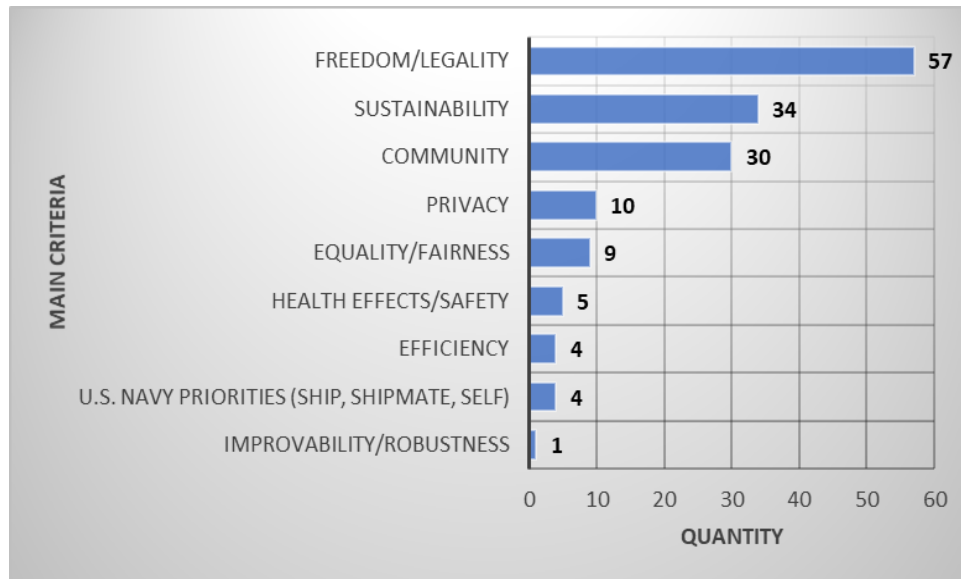
Table 4. Survey Question #8: How many deployments (6 months or more) have you had onboard a U.S. naval vessel? (Only numbers may be entered in this field. Each answer must be between 0 and 40.)

Maximum	10
Median	2
Minimum	0
Mean	1.935
Mode	1, 2 *
Range	8
Standard Deviation	1.566

\*Two responses (“1” and “2”) had equal qualities (52 each) for Mode.

## B. ALCOHOL-RELATED POLICY QUESTIONS

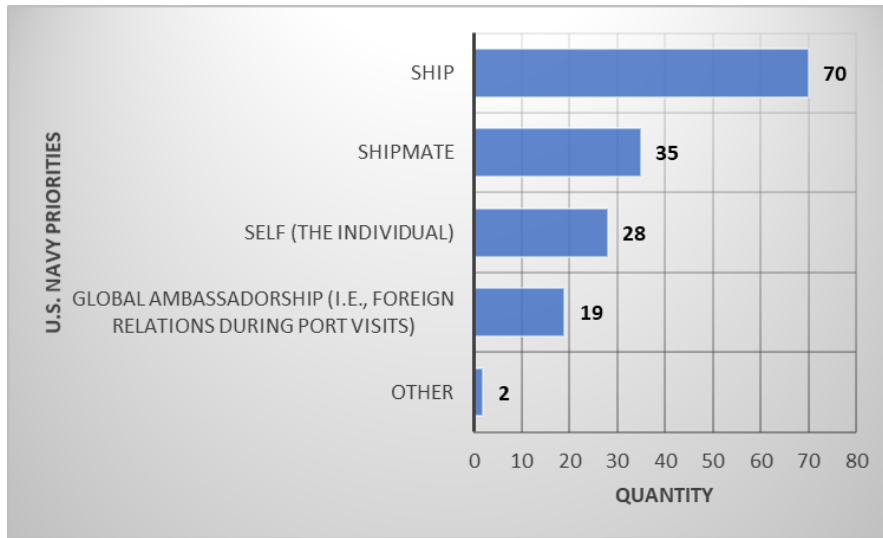
Figure 8. Survey Question #9. What is your main criteria in creating an alcohol policy?



The top three criteria in creating an alcohol policy were: Freedom/Legality at 37.01%, Sustainability at 22.08%, and Community at 19.48%. There was no response for Other.

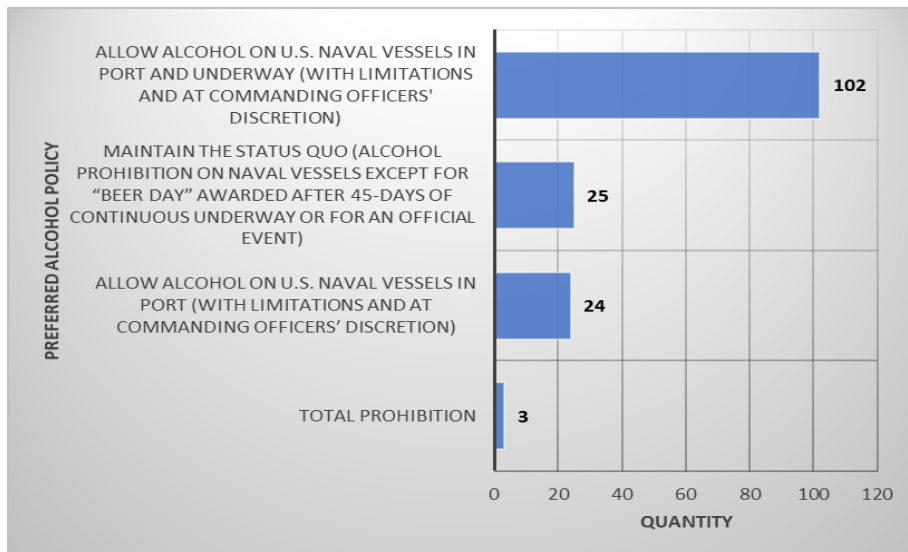


Figure 9. Survey Question #10. Of the following, what would be your overall priority to safeguard regarding alcohol policy?



The majority of survey participants ranked Ship (45.45%) as the overall priority to safeguard regarding alcohol policy versus Shipmate (22.73%), Self (18.18%), Global Ambassadorship (12.34%), and Other (1.30%).

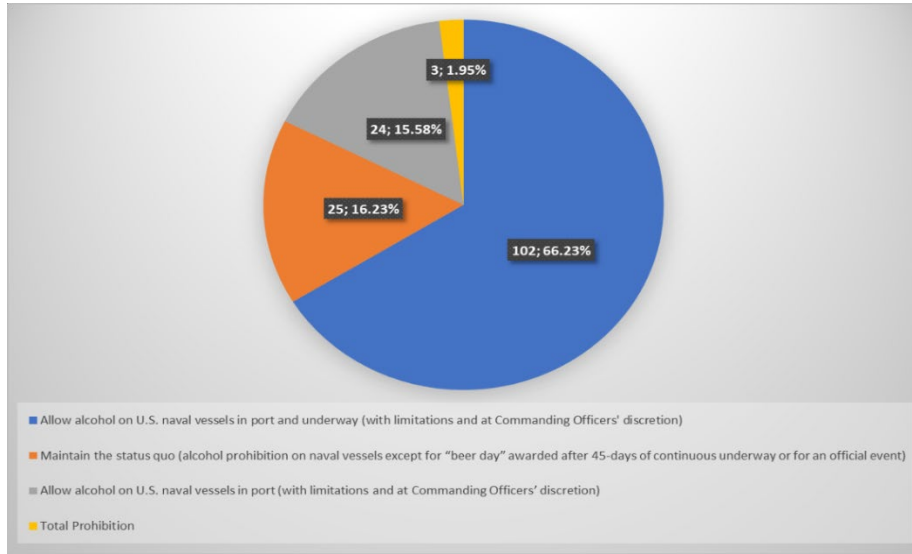
Figure 10. Survey Question #11. Please select the policy which most closely aligns with your preferred alcohol policy for the Department of the Navy.



The majority of survey participants preferred an alcohol policy allowing alcohol on U.S. naval vessels in port and underway (66.23%) versus the status quo (16.23%), in port only (15.58%), and total prohibition (1.95%).

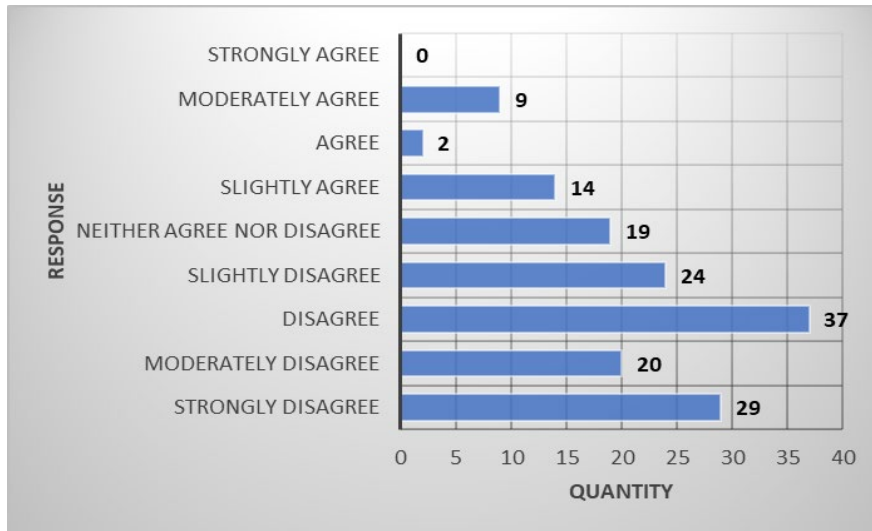


Figure 11. Survey Question #11. Graphical representation as a pie chart.



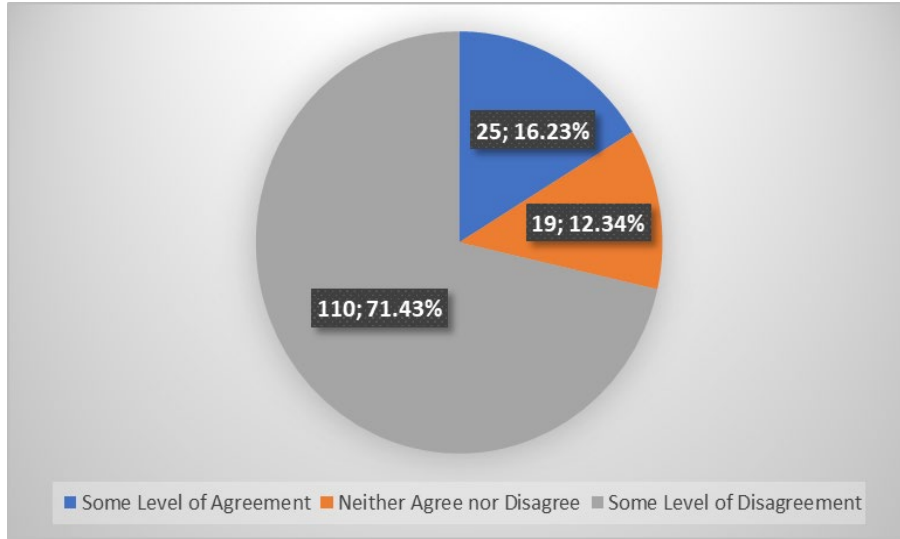
The majority of survey participants preferred an alcohol policy allowing alcohol on U.S. naval vessels in port and underway (66.23%) versus the status quo (16.23%), in port only (15.58%), and total prohibition (1.95%).

Figure 12. Survey Question #12. The Department of the Navy's alcohol policy is effective at promoting responsible alcohol use and preventing misuse.



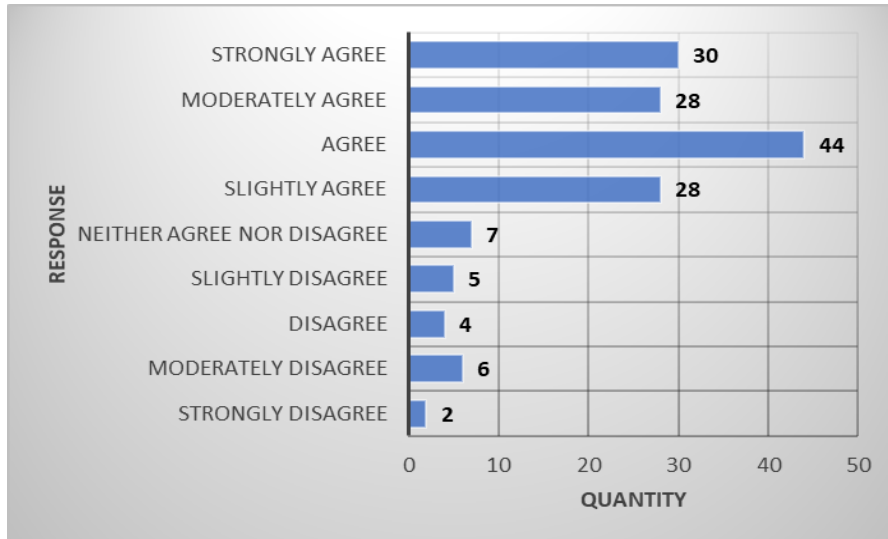
The majority of survey participants' responses leaned toward disagreement in effectiveness at promoting responsible alcohol use and preventing misuse. There were no responses for the "Strongly Agree" category.

Figure 13. Survey Question #12. Pie chart summarizing some level of agreement, disagreement, or neither.



The majority of survey participants responded with some level of disagreement (71.43%) versus neither agreement/disagreement (12.34%) and some level of agreement (16.23%).

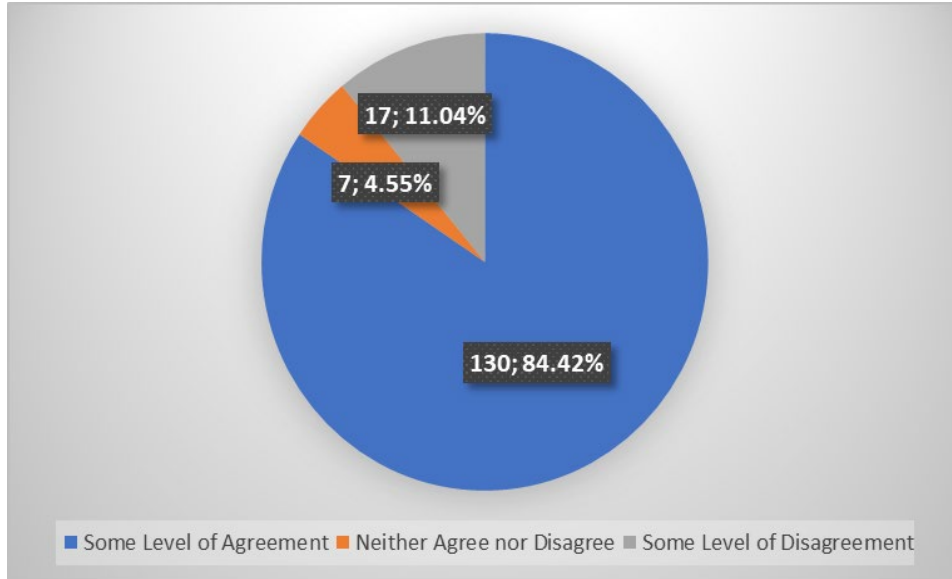
Figure 14. Survey Question #13. The Department of the Navy’s alcohol policy indirectly promotes misuse (specifically binge drinking and heavy drinking) before/after deployments and during port visits.



The majority of survey participants’ responses leaned toward agreement that the current alcohol policy indirectly promotes misuse (specifically binge drinking and heavy drinking) before/after deployments and during port visits.

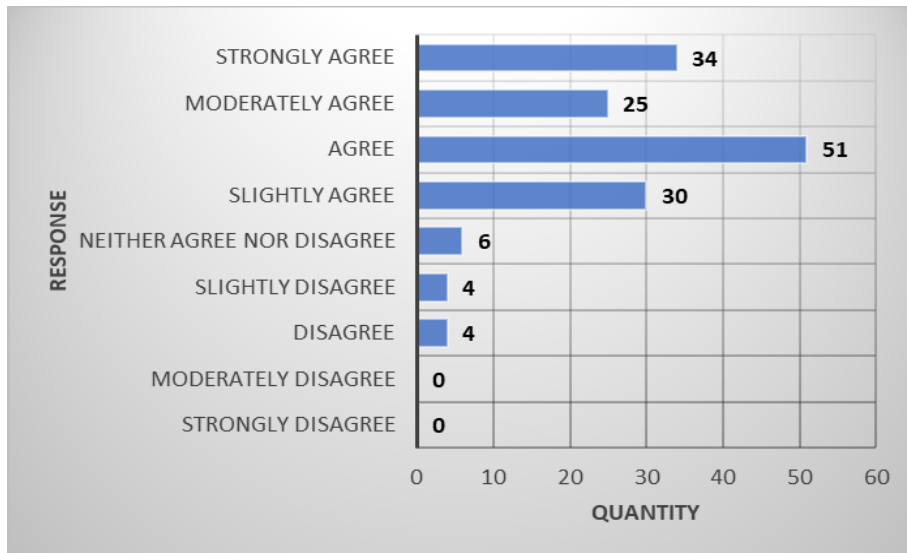


Figure 15. Survey Question #13. Pie chart summarizing some level of agreement, disagreement, or neither.



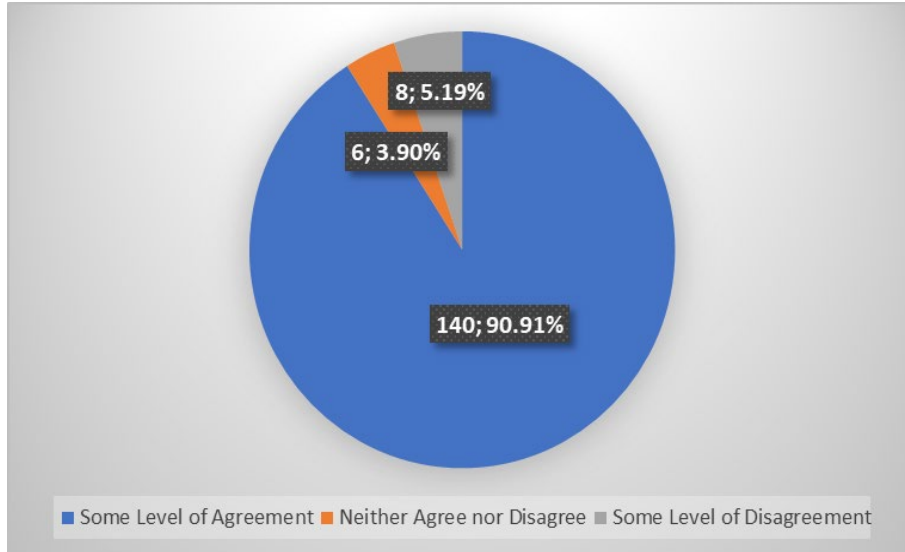
The majority of survey participants responded with some level of agreement (84.42%) versus neither agreement/disagreement (4.55%) or some level of disagreement (11.04%).

Figure 16. Survey Question #14. The U.S. Navy has an alcohol culture.



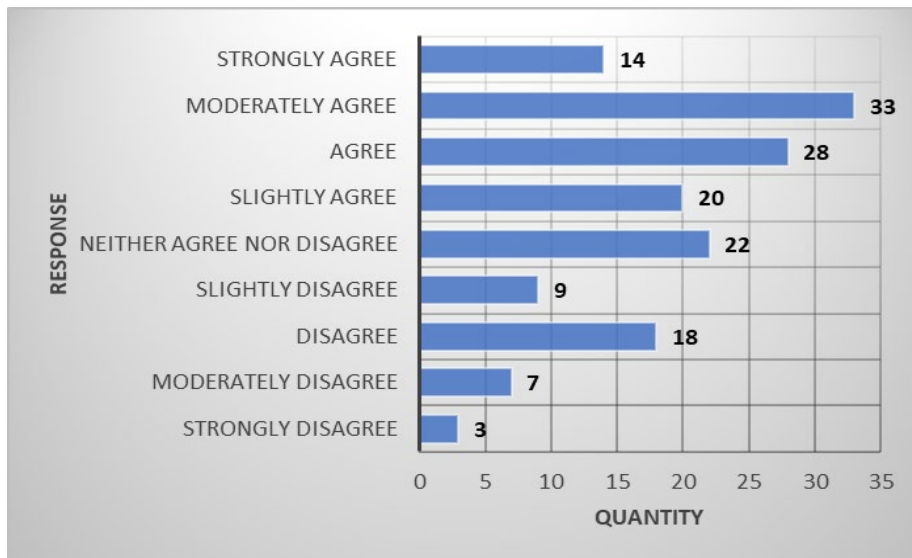
The majority of survey participants' responses leaned toward agreement that the U.S. has an alcohol culture current. There were no responses for the "Moderately Disagree" and "Strongly Disagree" categories.

Figure 17. Survey Question #14. Pie chart summarizing some level of agreement, disagreement, or neither.



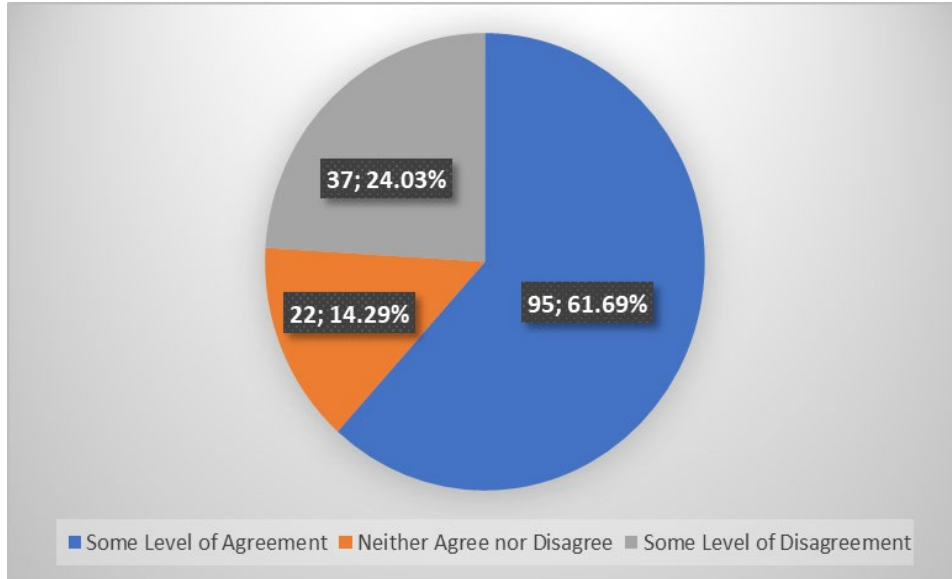
The majority of survey participants responded with some level of disagreement (90.91%) versus neither agreement/disagreement (3.90%) or some level of agreement (5.19%).

Figure 18. Survey Question #15. Disciplinary actions for alcohol-related incidents (ARIs) have taken time and attention away from my primary duties and responsibilities.



The majority of survey participants' responses leaned toward agreement in time and attention taken away from primary duties and responsibilities due to ARIs.

Figure 19. Survey Question #15. Pie chart summarizing some level of agreement, disagreement, or neither.

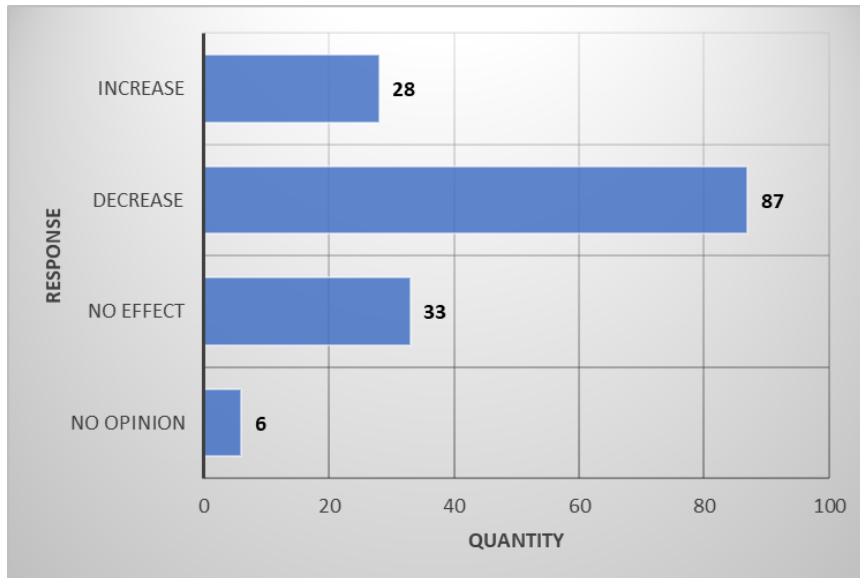


The majority of survey participants responded with some level of agreement (61.69%) versus neither agreement/disagreement (14.29%) or some level of disagreement (24.03%).

Table 5. Survey Question #16. On average, how many manhours/month have you lost due to disciplinary actions regarding ARIs? (Only numbers may be entered in this field. Each answer must be between 0 and 720.)

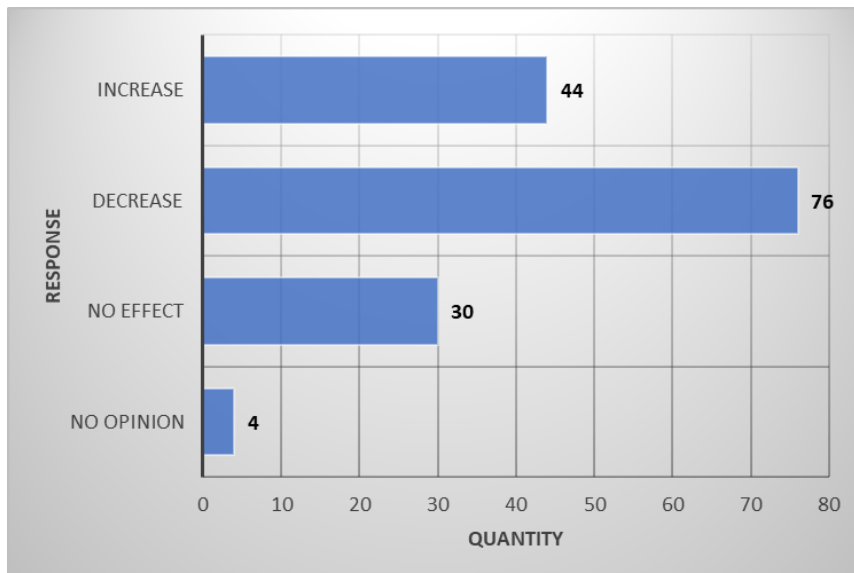
Maximum	480
Median	4
Minimum	0
Mean	19.481
Mode	0
Range	480
Standard Deviation	52.340

Figure 20. Survey Question #17. Allowing alcohol consumption on U.S. naval vessels would \_\_\_\_\_ alcohol misuse.



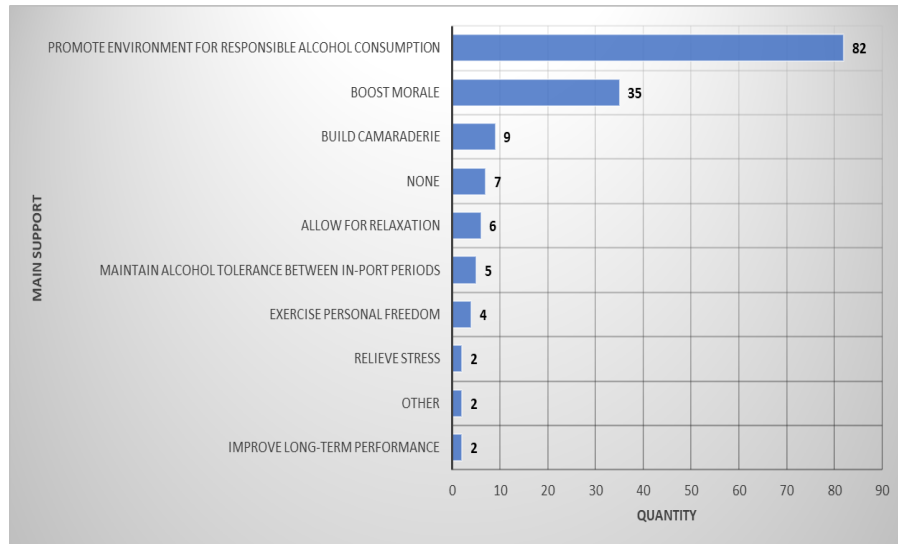
The majority of survey participants thought that allowing alcohol consumption on U.S. naval vessels would decrease (56.49%) alcohol misuse.

Figure 21. Survey Question #18. Allowing alcohol consumption on U.S. naval vessels would \_\_\_\_\_ alcoholic-related disciplinary incidents (ARIs).



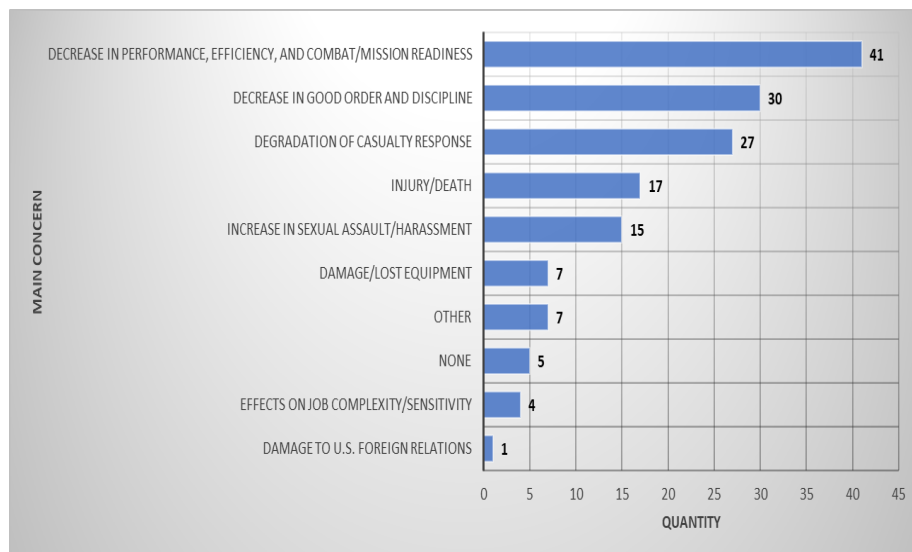
The majority of survey participants thought that allowing alcohol consumption on U.S. naval vessels would decrease (49.35) ARIs.

Figure 22. Survey Question #19. My main support for allowing alcohol consumption on U.S. naval vessels would be.



The top three main supports from survey participants for allowing alcohol consumption on U.S. naval vessels were: promote environment for responsible alcohol consumption (53.25%), boost morale (22.73%), and build camaraderie (5.84%).

Figure 23. Survey Question #20. My main concern of allowing alcohol consumption on U.S. naval vessels would be.



The top three main concerns from survey participants for allowing alcohol consumption on U.S. naval vessels were: decrease in performance, efficiency, and combat/mission readiness (26.62%); decrease in good order and discipline (19.48%), and degradation of casualty response (17.53%).

## C. FINDINGS

The primary finding from my research identify the preferences of 154 U.S. naval officers' regarding which alcohol policy most closely aligned with their preferred alcohol policy for the DON (Figures 10–11). 66.23% of survey participants preferred an alcohol policy that would allow alcohol on U.S. naval vessels in port and underway (with limitations and at commanding officers' discretion). 16.23% preferred maintaining the status quo. 15.58% preferred an alcohol policy that would allow alcohol on U.S. naval vessels in port only (with limitations and at commanding officers' discretion). 1.95% even preferred a more restrictive alcohol policy of total alcohol prohibition. In comparison with the status quo, a combined 81.81% of survey participants preferred an alcohol policy which would allow alcohol on U.S. naval vessels to a greater extent than presently. Alternatively, when combining the status quo and total alcohol prohibition, only 18.18% of the sample population chose between these two options.

Other primary findings included the identification of the sample population's perceptions related to the current alcohol policy (Figures 12–15). 71.43% of survey participants leaned toward disagreement with the current alcohol policy's effectiveness at promoting responsible alcohol use and preventing misuse. 84.42% even leaned toward agreement that the current alcohol policy actually promotes alcohol misuse, though indirectly, by restricting U.S. sailors' opportunity to drink while only in port while off ship. As researched by others, alcohol consumption leading to misuse significantly increases immediately before/after deployments and during port visits in anticipation of alcohol prohibition underway (Harberston, 2016, p. 185). In addition, 90.91% of survey participants (Figures 16–17) leaned toward agreement that the U.S. Navy has an alcohol culture.

Secondary findings included participants' criteria in creating alcohol policy, opinions on allowing alcohol on U.S. naval vessels, and their main support/concern factors for allowing alcohol aboard U.S. naval vessels. With respect to desired criteria in creating alcohol policy (Figures 8–9), the top three responses were: 1) freedom/legality, 2) sustainability, and 3) community. Regarding whether or not allowing alcohol back onboard U.S. naval vessels would affect alcohol misuse, survey participants' opinions would



suggest that it might. 87 survey participants (56.49%) responded that they believed allowing alcohol on U.S. naval vessels would decrease alcohol misuse. 28 participants (18.18%) responded that it would increase alcohol misuse. 33 participants (21.43%) believed there would be no effect, while 6 participants (4.90%) had no opinion at all. Additionally, regarding whether or not allowing alcohol back onboard U.S. naval vessels would affect ARIs, survey participants' opinions would also suggest that it might. 76 survey participants (49.35%) responded that they believed allowing alcohol on U.S. naval vessels would decrease alcohol misuse. 44 participants (28.57%) responded that it would increase alcohol misuse. 30 participants (19.48%) believed there would be no effect, while 4 participants (2.60%) had no opinion at all.

If alcohol consumption was to be allow back aboard U.S. naval vessels, it would be important to understand what would be supporting and concerning factors. With respect to main supports (Figure 22), the top three responses of survey participants were: 1) promote environment for responsible alcohol consumption, 2) boost morale, and 3) build camaraderie. With respect to main concerns (Figure 23), the top three responses of survey participants were: 1) decrease in performance, efficiency, and combat/mission readiness; 2) decrease in good order and discipline; and 3) degradation of casualty response. With fleet feedback, these are important factors to consider when developing future alcohol policies.

#### **D. LIMITATIONS**

My research strategy has three significant limitations. First, a literature review was only conducted with alternatives to the DON's alcohol policy being the alcohol policies (the RAN alcohol policy and the U.K. Royal Navy alcohol policy) from other English-speaking countries with whom the U.S. has strong foreign relations and interoperability. There are other world navies who prohibit alcohol aboard their naval vessels, and there are also other world navies who allow alcohol aboard their naval vessels. These policies would be worth reviewing. Second, in addition, attaining these RAN and U.K. Royal Navy policies was extremely limited. Due to the sensitivity of shipboard operations and accessibility online, I was unable to attain detailed policy and procedures regarding the



conduct of allowing alcohol onboard their respective naval vessels. Third, although the targeted naval population at NPS had operational experience from across the fleet and represented a variety of designations and platforms, survey participants were mainly junior officers O-2 through O-4 with one O-5. This does not account for preferences and views of senior enlisted (E-7 through E-9) and senior officers (O-5 and above). Due to their high level of involvement in command leadership and coordination, their input would be invaluable and should be identified as well.





## V. CONCLUSION

Alcohol misuse is associated with chronic diseases, various cancers, high blood pressure, psychological disorders, unintentional injuries, violence, and other alcohol use disorders (CDC, 2022, para. 10). Not only can alcohol misuse be detrimental to U.S. sailors' lives, but it can also divert commands' resources from operational readiness. This disruption overall impairs the U.S. Navy's ability to effectively support operations due to manning issues and lost man hours caused by health issues and alcoholic-related incidents (ARIs). This thesis documents a distinct differentiation in viewpoints between policy set by decision makers and fleet feedback from U.S. naval officers at NPS.

### A. RECOMMENDATION

After reviewing previous DOD HRBSs in my literature review, the rates of alcohol misuse relating to binge drinking and heavy alcohol use/drinking in the U.S. Navy have been consistent over the past twenty years. Compounded with the forementioned findings and limitations of my research, I recommend that further policy evaluation be conducted utilizing a formal CBA framework to compare the DON's alcohol policy against other foreign navies' alcohol policies. In doing so, one would be better able to determine which alcohol policy would best promote responsible alcohol consumption among U.S. sailors. According to the fifth edition of *Cost-Benefit Analysis: Concepts and Practice* by Anthony E. Boardman et al., the major steps in a CBA are as follows:

1. Explain the purpose of the CBA.
2. Specify the set of alternative projects.
3. Decide whose benefits and costs count.
4. Identify the impact categories, catalogue them, and select metrics.
5. Predict the impacts quantitatively over the life of the project.
6. Monetize all impacts.
7. Discount benefits and costs to obtain present values.
8. Compute the net present value of each alternative.



9. Perform sensitivity analysis.
10. Make a recommendation. (Boardman, 2018, p. 5)

This thesis' research will be able to assist future researchers in developing steps 1–4 of the above formal process. A policy change of this magnitude cannot simply be made alone on the results of a survey of U.S. naval officers at NPS, but these survey results specifically provide useful insight into public opinion (fleet feedback) regarding whose benefits and costs count. Conducting a CBA to identify the most effective alcohol policy may also require additional future research.

## **B. FUTURE RESEARCH**

As previously stated, conducting a CBA to identify the alcohol policy that would best promote responsible alcohol consumption may also require additional research. Such future research would include:

1. Improving this survey questionnaire and continuing to survey future NPS cohorts to collect additional data points. Conducting similar surveys at other DOD institutions of higher education, i.e., the Naval War College and Senior Enlisted Academy, to collect additional data points and potentially identify trends across the fleet.
2. Due to our increasing interoperability, conducting research jointly between the U.S. Navy, RAN, and the U.K. Royal Navy may also provide insight that would be beneficial to all three naval service branches in promoting responsible alcohol consumption amongst its respective sailors.
3. Conducting a feasibility study to determine whether or not current U.S. ship/vessel designs/infrastructure could be modified to support allowing alcohol storage, sale, and consumption while underway.

The overall purpose of my research was to identify preferences and views of U.S. naval officers in what they believe would best promote responsible alcohol consumption among U.S. sailors. In the 2018 DOD HRBS, the Rand Corporation stated: “DOD, the services, and the Coast Guard must better understand the culture and climate surrounding alcohol



use and then take steps to shift the culture away from excessive use” (Meadows et al., 2021, p. 215). At the very least, my research adds data points to supplement other bodies of work for the DON’s consideration to better understand the culture and climate surrounding alcohol in the U.S. Navy.



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# APPENDIX. SURVEY – ALCOHOL ON U.S. NAVAL VESSELS



## Survey – Alcohol on U.S. Naval Vessels

### Study Information Sheet

Permission. The Naval Postgraduate School (NPS) Institutional Review Board (IRB) approved protocol number for this survey is [REDACTED].

Please read the following "Study Information Sheet" prior to proceeding forward.

**Introduction.** You are invited to participate in a research study on the Department of the Navy's alcohol control and prevention policy onboard U.S. naval vessels. The overall purpose of my thesis research is to assess different alcohol policies and identify the best policy to promote responsible alcohol consumption among U.S. Sailors.

**Participation.** Your participation in this study is strictly voluntary. If you choose to participate, you can change your mind at any time and withdraw from the study. You will not be penalized in any way or lose any benefits to which you would otherwise be entitled if you choose not to participate in this study or to withdraw.

**Procedures.** As U.S. naval officers (age: 21+) at NPS who have previously deployed aboard a U.S. naval vessel, you are being asked to complete a web-based anonymous survey relating to the Department of the Navy's alcohol policy onboard U.S. naval vessels. The survey is 20 questions and should take approximately 10-15 minutes to complete. No compensation will be provided.

**Location.** The survey will be facilitated online through Qualtrics. The link will remain active for three weeks until 11:59PM on 24 August 2022.



**Potential Risks and Discomforts.** The potential risk of breach of confidentiality is minimal in this study. This survey is anonymous and strictly voluntary. No IP addresses will be collected, and no personally identifiable information (PII) will be collected.

**Anticipated Benefits.** You will not directly benefit from your participation in this research. However, the results of the survey may inform policy makers' decisions about maintaining the status quo or changing policy.

**Confidentiality & Privacy Act.** Any information that is obtained during this study will be kept confidential to the full extent permitted by law. All efforts, within reason, will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed. Survey responses will be stored on secure hard drives and servers used by the research team.

**Points of Contact.** If you have any questions or comments about the research, or you experience an injury or have questions about any discomforts that you experience while taking part in this study, please contact the Principal Investigator, Dr. Ryan Sullivan, [rsullivan@nps.edu](mailto:rsullivan@nps.edu). Questions about your rights as a research subject or any other concerns may be addressed to the Navy Postgraduate School IRB Chair, Dr. Larry Shattuck, 831-656-2473, [lgshattu@nps.edu](mailto:lgshattu@nps.edu).

**Permission to Participate.** I have read the information provided above. I have been given the opportunity to ask questions, and all the questions have been answered to my satisfaction. I understand that by agreeing to participate in this research and signing this form, I do not waive any of my legal rights. By clicking on the "Yes" button, I am acknowledging that I have read and understand this information, and that I agree to voluntarily participate in the survey.

Please click either the "Yes" button and proceed with the survey, or the "No" button and exit the survey if you choose not to participate.

- Yes, proceed with the Survey.
- No, exit the Survey.



**DEMOGRAPHICS:**

Question 1. Gender:

- Male
- Female

Question 2. Age:

- 21-24
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60-64
- 65 and older

Question 3. What is your rank?

- W-1
- W-2
- W-3
- W-4
- W-5
- O-1
- O-2
- O-3
- O-4
- O-5 and above

Question 4. Are you prior enlisted?

- Yes
- No



Question 5. How many years have you been in the U.S. Navy?  
(Only whole numbers may be entered in this field. Each answer must be between 0 and 40.)

Question 6. Select the appropriate category related to your designator: (If your designator has changed while at NPS, please select category while assigned/embarked on a U.S. naval vessel.)

- Unrestricted Line Officer
- Restricted Line Officer
- Staff Corps Officer
- Limited Duty Officer
- Warrant Officer

Question 7. What type of U.S. naval vessel? (Please select the type of vessel that you served on the longest as an officer.)

- Submarine Tender (AS)
- Cruiser (CG)
- Aircraft Carrier (CV/CVN)
- Destroyer (DD/DDG)
- Expeditionary Sea Base (ESB)
- Frigate (FF/FFG)
- Command Ship (LCC)
- Littoral Combat Ship (LCS)
- Amphibious Assault Ship (LHA/LHD)
- Amphibious Transport Dock (LPD)
- Dock Landing Ship (LSD)
- Mine Countermeasures Ship (MCM)
- Patrol Coastal (PC)
- Submarine - Ballistic Missile (SSBN)
- Submarine - Guided Missile (SSGN)
- Submarine - Fast Attack (SSN)
- Hospital Ship (T-AH)
- Military Sealift Command (MSC) Ship
- Other





Question 8. How many deployments (6 months or more) have you had onboard a U.S. naval vessel? (Only whole numbers may be entered in this field. Each answer must be between 0 and 40.)

**ALCOHOL-RELATED QUESTIONS:**

Question 9. What is your main criteria to consider when creating an alcohol policy?

- Community
- Efficiency
- Equality/Fairness
- Freedom/Legality
- Health Effects/Safety
- Improvability/Robustness
- Privacy
- Sustainability
- U.S. Navy Priorities (Ship, Shipmate, Self)
- Other

Question 10. Of the following, what would be your overall priority to safeguard regarding alcohol policy?

- Ship
- Shipmate
- Self (the individual)
- Global Ambassadorship (i.e., foreign relations during port visits)
- Other

Question 11. Please select the policy which most closely aligns with your preferred alcohol policy for the Department of the Navy:

- Maintain the status quo (alcohol prohibition on naval vessels except for "beer day" awarded after 45-days of continuous underway or for an official event)
- Allow alcohol on U.S. naval vessels in port (with limitations and at Commanding Officers' discretion)
- Allow alcohol on U.S. naval vessels in port and underway (with limitations and at Commanding Officers' discretion)
- Total alcohol prohibition



Question 12. The Department of the Navy's alcohol policy is effective at promoting responsible alcohol use and preventing misuse.

The Department of the Navy's alcohol policy is effective at promoting responsible alcohol use and preventing misuse.

- Strongly Disagree
- Disagree
- Moderately Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Moderately Agree
- Agree
- Strongly Agree

Question 13. The Department of the Navy's alcohol policy indirectly promotes misuse (specifically binge drinking and heavy drinking) before/after deployments and during port visits.

The Department of the Navy's alcohol policy indirectly promotes misuse (specifically binge drinking and heavy drinking) before/after deployments and during port visits.

- Strongly disagree
- Disagree
- Moderately Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Moderately Agree
- Agree
- Strongly Agree

Question 14. The U.S. Navy has an alcohol culture.

The U.S. Navy has an alcohol culture.



The U.S. Navy has an alcohol culture.

- Strongly disagree
- Disagree
- Moderately Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Moderately Agree
- Agree
- Strongly Agree

Question 15. Disciplinary actions for alcohol-related incidents (ARIs) have taken time and attention away from my primary duties and responsibilities.

Disciplinary actions for alcohol-related incidents (ARIs) have taken time and attention away from my primary duties and responsibilities.

- Strongly disagree
- Disagree
- Moderately Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Moderately Agree
- Agree
- Strongly Agree

Question 16. On average, how many manhours/month have you lost due to disciplinary actions regarding ARIs? (Only whole numbers may be entered in this field. Each answer must be between 0 and 720.)

Question 17. Allowing alcohol consumption on U.S. naval vessels would \_\_\_\_\_ alcohol misuse.



- Increase
- Decrease
- No effect
- No opinion

Question 18. Allowing alcohol consumption on U.S. naval vessels would \_\_\_\_\_ alcoholic-related disciplinary incidents (ARIs).

- Increase
- Decrease
- No effect
- No opinion

Question 19. My main support for allowing alcohol consumption on U.S. naval vessels would be:

- Allow for relaxation
- Boost morale
- Build camaraderie
- Exercise personal freedom
- Improve long-term performance
- Maintain alcohol tolerance between in-port periods
- Promote environment for responsible alcohol consumption
- Relieve stress
- Other
- None

Question 20. My main concern for allowing alcohol consumption on U.S. naval vessels would be:

- Damage/lost equipment
- Damage to U.S. foreign relations
- Decrease in performance, efficiency, and combat/mission readiness
- Decrease in good order and discipline
- Degradation of casualty response
- Effects on job complexity/sensitivity
- Injury/Death
- Increase in sexual assault/harassment
- Other
- None



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