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Differences in Alcohol Screening and Alcohol Problems Among United States Veterans Based on Military Service History

Rachel A. Hoopsick[1], Bonnie M. Vest[1], D. Lynn Homish[2], and Gregory G. Homish[2]
[1] Department of Family Medicine, University at Buffalo, The State University of New York
[2] Department of Community Health and Health Behavior, University at Buffalo, The State University of New York

Military deployment is a risk factor for alcohol problems, and postdeployment alcohol problems are more prevalent among part-time reservists than full-time active duty service members. However, emerging research suggests that reservists who *never* experience deployment are also at risk. We examined if never-deployed/activated reserve veterans differed from active duty/deployed veterans in alcohol screening and misuse. Using pooled cross-sectional data from the National Survey on Drug Use and Health (NSDUH; 2015–2019), we estimated the prevalence of past-year self-reported alcohol screening by a health care provider and measured DSM-IV alcohol abuse and alcohol dependence among U.S. veterans aged 18–49 years with at least one health care visit in the past year (N = 4,148). We used regression models to examine for differences in these outcomes between never-deployed/activated reserve veterans and active duty/deployed veterans. Overall, 15% of veterans reported not being screened for alcohol use, despite 1 in 11 meeting DSM-IV criteria for alcohol abuse/dependence. Active duty/deployed veterans were more likely to have been screened for alcohol use than never-deployed/activated reserve veterans ($p < .05$). However, there was no difference in past-year alcohol abuse ($p > .05$) or dependence ($p > .05$) between never-deployed/activated reserve veterans and veterans with a history of active duty service/activation. Never-deployed/activated reserve veterans are *less* likely to be screened for alcohol use than active duty/deployed veterans, despite no significant difference in meeting alcohol abuse/dependence criteria. Providers may not recognize never-deployed reservists as veterans. We recommend systematic screening for military service history and alcohol use for all veterans, regardless of deployment/active duty service.

Impact Statement
This study shows that veterans with and without a history of active duty service or deployment have a similar likelihood of meeting clinical criteria for alcohol abuse and dependence. However, reserve veterans who were never deployed or activated were less likely to be asked about their alcohol use by a health care provider than veterans who were previously deployed or had active duty service. A universal alcohol screening approaches are recommended.

Keywords: military, deployment, alcohol abuse, alcohol dependence, alcohol screening

Heavy alcohol consumption is among the leading causes of death in the U.S. (Centers for Disease Control and Prevention [CDC], 2019) and has remained a considerable problem among U.S. military populations for decades (Bray & Hourani, 2007). Data from the Department of Defense indicates that more than 80% of current-era service members regularly consume alcohol and that two in five service members have engaged in binge drinking in the last 30 days (Stahre et al., 2009). These estimates exceed the prevalence of current drinking (55%) and binge drinking (27%) among adults in the general population (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019b). There is a growing body of evidence suggesting that leaving military service may exacerbate problems with alcohol (Vest, Homish, et al., 2018); national data show that veterans are just as likely to report using alcohol as their currently serving counterparts, but have two-fold greater odds of meeting diagnostic criteria for alcohol dependence (Hoopsick et al., 2017).

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Rachel A. Hoopsick https://orcid.org/0000-0001-5992-9007
Bonnie M. Vest https://orcid.org/0000-0002-3401-7367
D. Lynn Homish https://orcid.org/0000-0002-1658-1482
Gregory G. Homish https://orcid.org/0000-0003-2601-3283
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Correspondence concerning this article should be addressed to Rachel A. Hoopsick, Department of Family Medicine, University at Buffalo, The State University of New York, 3435 Main Street, 335 Kimball Tower, Buffalo, NY 14214, United States. Email: rachelh@buffalo.edu

Military reservists with part-time military service appear to be even *more* susceptible to problems with alcohol than those with full-time active duty service (Cohen et al., 2015; Milliken et al., 2007). Data from the 2018 Health Related Behaviors Survey (HRBS), which includes data from over 16,000 reservists, shows over 20% of these part-time service members endorsed the presence of a military culture within the Reserves that supports drinking (RAND Corporation, 2021). Specifically, one in five reservists believed that it is hard to "fit in" with their unit if they did not drink, that drinking is just a part of being in a military unit, that all unit members are encouraged to drink at social events, and/or that unit leaders are tolerant of drunkenness when personnel are off duty (RAND Corporation, 2021). Further, HRBS data also show that reservists are more likely to engage in binge drinking than the general population (RAND Corporation, 2021). Data from the Millennium Cohort Study also show that reservists are particularly vulnerable to heavy drinking, binge drinking, and alcohol-related problems during the postdeployment period, with the youngest service members being at the greatest risk for adverse alcohol-related behaviors and sequalae (Jacobson et al., 2008).

Despite having similar rates of problematic alcohol use and other behavioral health conditions (Chapman et al., 2014; Hoopsick et al., 2020; Hoopsick, Homish, Bartone, et al., 2018; Trautmann et al., 2014), service members who have never been deployed report stigma and barriers to health care, and are less likely to seek behavioral health treatment than service members who were previously deployed (Chapman et al., 2014). Active duty service members (full-time) and reservists (part-time) both have the potential to be deployed, and when deployed, active duty service members and reservists have similar roles and combat experiences. But in addition to deployment, reservists can also be activated to support domestic emergencies and may be required to serve in a full-time capacity for an extended period of time. However, some reservists are never deployed overseas for combat missions or activated to support domestic emergencies before leaving the military, and these never-deployed/activated reserve veterans may be vulnerable to problems with alcohol. Emerging data suggest that reservists who have never been deployed are just as likely to engage in frequent heavy drinking and hazardous alcohol consumption than their previously deployed reservist counterparts (Hoopsick et al., 2020).

The National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2005) the U.S. Preventive Services Task Force (USPSTF; Maciosek et al., 2017), and the SAMHSA (2011) recommend routine screening of all patients in primary and other health care settings for alcohol use. Screening, brief intervention, and referral to treatment (SBIRT) is a comprehensive public health approach to providing universal screening, secondary prevention, early intervention, and treatment for people who have problematic or hazardous alcohol problems and is recommended for patients in primary care and other health care settings (SAMHSA, 2011) Given that military service members are at increased risk for problems with alcohol, especially younger service members (Jacobson et al., 2008) and those who have left the military (Hoopsick et al., 2017; Vest, Homish, et al., 2018), it is important to gain additional context into current-era veterans' likelihood of being screened for alcohol use. Given that less than half of eligible veterans receive services at Veterans Administration (VA) health care facilities (Hinojosa et al., 2010; Straits-Troster et al., 2011), a broader understanding of veterans' health care experiences related to alcohol screening could inform more effective interventions in community-based settings, including the adoption of SBIRT. Further, SBIRT in community-based settings is especially important given that reserve veterans who have never been deployed or activated are ineligible for health benefits under the VA.

It is not well understood if there are differences in the likelihood of being screened for alcohol use based on veterans' history of activation or active duty service, which may partially explain the observed differences in care-seeking based on deployment. To date, most of the literature on alcohol in military populations has focused on currently serving military personnel or Vietnam-era veterans. As such, the objective of the present study is to utilize national data to examine the cross-sectional relations between military service history (active duty/deployed veterans compared to never-deployed/activated reserve veterans), self-reported screening for alcohol use by a health care provider, and measured alcohol abuse and alcohol dependence among current-era U.S. military veterans. Expanded knowledge of alcohol problems among veterans with and without a history of deployment or activation can improve prevention, screening, and treatment efforts for this population as a whole. Moreover, understanding the potential differences in health care experiences of veterans based on military service history has implications for policymaking to expand and improve health care delivery for veterans.

Method

Data Source

The National Survey on Drug Use and Health (NSDUH) is a large nationally representative survey on substance use and other health-related topics directed by SAMHSA, and it has been administered periodically since 1971 and annually since 1990 (SAMHSA, 2020a). The NSDUH sample includes individuals from the noninstitutionalized U.S. population aged 12 years and older (from all 50 states and Washington, D.C.), excluding current military personnel on active duty. However, the NSDUH does include veterans (i.e., people who have served in the United States Armed Forces but have since separated or retired from the military), the focus of the present study. NSDUH data are collected using computer-assisted interviewing at participants' place of residence. Participants read or listen to the questions on headphones and enter answers directly on a NSDUH-provided laptop computer. Interviews take approximately 1 hr to complete and participants are compensated $30 for their time.

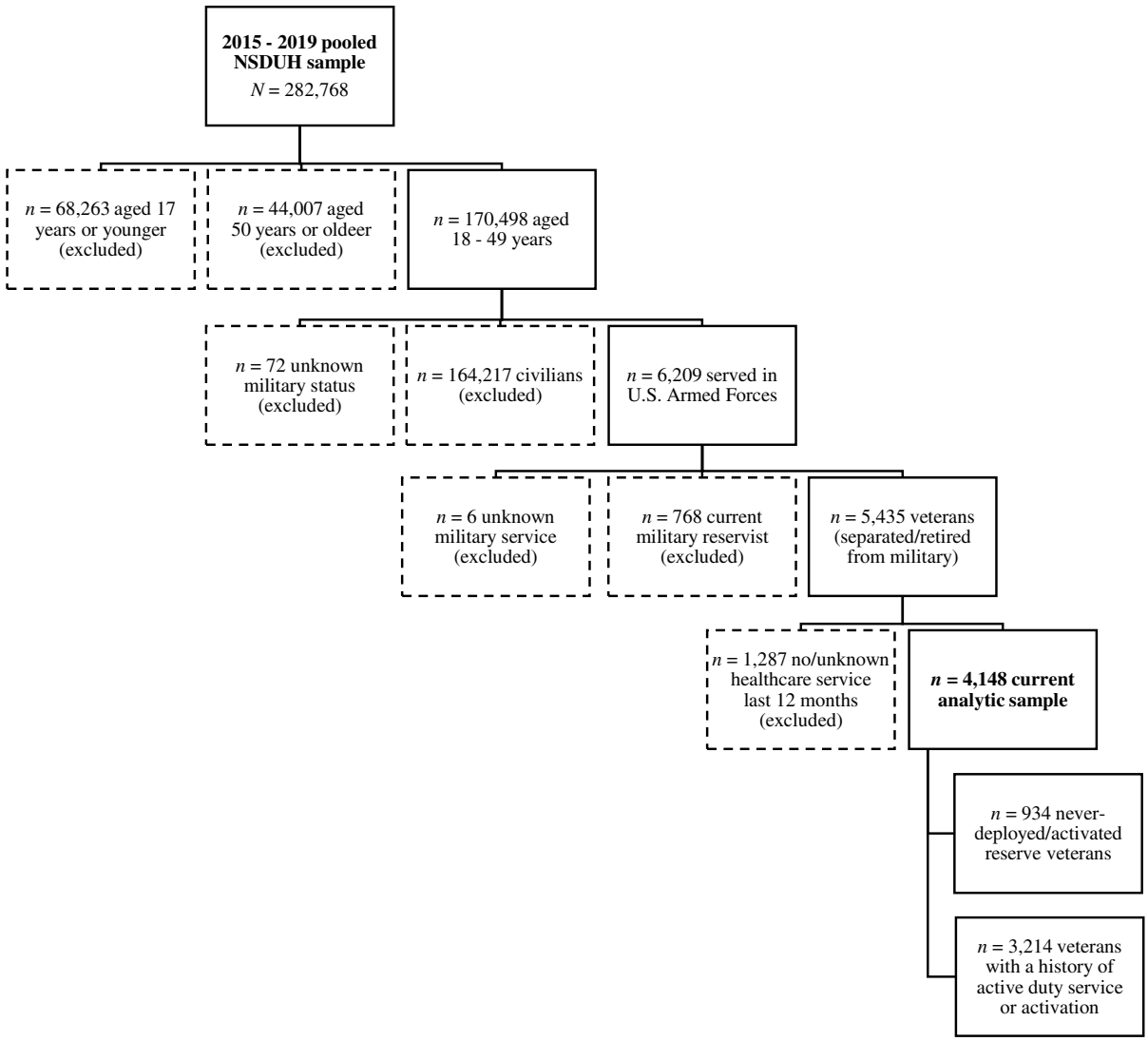
To obtain recent estimates of alcohol screening by a health care provider, alcohol abuse, and alcohol dependence among a large sample of current-era veterans, we first pooled data from the 2015, 2016, 2017, 2018, and 2019 waves of the NSDUH—the most recent publicly available data at the time of this publication. Overall sample sizes exceeded 67,000 for each of these study years. Weighted response rates for screening and interviewing exceeded 70% and 64%, respectively, for each study wave included in the current analysis (SAMHSA, 2016, 2017, 2018, 2019a, 2020b). Unlike the 2005–2013 NSDUHs, where a four-stage selection design was used, the waves of the NSDUH included in the present study (2015–2019) used a five-stage sample selection scheme in which an extra selection stage of census blocks from census tracts was added before the

selection of a segment, which is accounted for in NSDUH's design-based weights (SAMHSA, 2020a). Adjustment factors were then applied to the design-based weights to adjust for nonresponse, to poststratify to known population control totals, and to control for extreme weights, resulting in NSDUH's final analysis weights, which are used to create estimates that are representative of the target population (SAMHSA, 2020a).

To obtain a subsample of veterans (i.e., people who have served in the United States Armed Forces but have since separated or retired from the military), we included NSDUH participants who responded "Yes" to the question "Have you ever been in the United States Armed Forces?" and who also responded to the question "Are you currently on active duty in the United States Armed Forces, are you in a Reserve component, or are you now separated or retired from the military?" with a response of "Now separated/retired from reserves/active duty." We limited the sample to only those who were aged 18–49 years at the time of survey administration to obtain a subsample that was more representative of current-era veterans, as those less than 18 years old are unable to serve in the United States Armed Forces and veterans within the NSDUH age categories of 50–64 years old and 65 years or older are less likely to have a history of current-era service. Lastly, we included only those veterans who reported having at least one visit to a health care provider (including emergency room visit, overnight hospitalization, and/or outpatient visit) in the last 12 months to estimate the prevalence of alcohol screening among those who had the potential to be screened (Figure 1). The resulting study sample included current veterans aged 18–49 years with at least one visit to a health care provider in the last 12 months ($N = 4{,}148$), including never-deployed/activated reserve veterans ($n = 934$) and veterans with a history of active duty service/activation ($n = 3{,}214$). As a secondary analysis using publicly available de-identified data, Institutional Review Board approval was not needed for the present study.

Figure 1

Study Sample Selection



Participants

The NSDUH subsample of veterans included in the present study ($N = 4,148$) was mostly between the ages of 35 and 49, was predominantly male, and was racially/ethnically diverse (Table 1), which is comparable to current-era veterans nationally (Office of the Deputy Assistant Secretary of Defense, 2018). Most participants had an annual family income below $75,000 and the majority of veterans had health insurance coverage. Approximately 23% of the sample were never-deployed/activated reserve veterans ($n = 934$), while 77% were active duty/deployed veterans ($n = 3,214$). There were notable differences in demographic factors between these two groups. Never-deployed/activated reserve veterans were more likely to be in younger age categories ($p < .001$), were more likely to be female ($p < .001$), were more likely to have a lower family income ($p < .001$), and were less likely to have health insurance coverage ($p < .001$) than active duty/deployed veterans.

Measures

Our objective was to examine the cross-sectional relations between military service history (active duty/deployed veterans compared to never-deployed/activated reserve veterans), self-reported screening for alcohol use by a health care provider, and measured alcohol abuse and alcohol dependence among current-era U.S. military veterans using pooled national data from NSDUH. The following measures were used to assess the variables of interest:

Self-reported past-year alcohol screening, our first outcome of interest, was assessed using the question "During the past 12 months, did any doctor or other health care professional ask, either in person or on a form, if you use alcohol?" and was dichotomized (no/yes). Alcohol screening could have taken place in an emergency room visit, overnight hospitalization, and/or outpatient visit.

To measure veterans' past-year alcohol abuse and dependence (irrespective of alcohol screening status), our other outcomes of interest, we used a subset of NSDUH questions designed to evaluate clinical criteria for alcohol use disorder based on the DSM-IV (American Psychiatry Association [APA], 1994). These questions assessed for maladaptive patterns of drinking and clinically significant impairment or distress. Past-year alcohol abuse and alcohol dependence were each dichotomized (no/yes) for the absence or presence of sufficient clinical criteria for a probable diagnosis in the past 12 months (Appendix).

Military service history, our primary correlate of interest, was assessed with the question

> Have you ever served on active duty in the United States Armed Forces or Reserve components? Active duty does not include training for the Reserves or National Guard, but does include activation, for example, for a national emergency or military conflict.

Participants who answered "Yes" were included as active duty/deployed veterans. Participants who answered "No" represent reserve-only veterans who were never called to full-time service (for overseas deployment or stateside activation) and were therefore

Table 1
Characteristics of U.S. Veterans Aged 18–49 Years by Military Service History (N = 4,148)

Veteran subgroups	Never-deployed/activated reserve veterans ($n = 934$) % (n)	Veterans with a history of active duty service/activation ($n = 3,214$) % (n)	Significance test p value
Age	—	—	
18–21 years	6.3% (59)	1.1% (36)	
22–25 years	14.4% (134)	8.5% (272)	
26–29 years	9.2% (86)	10.6% (342)	
30–34 years	14.4% (134)	18.1% (583)	
35–49 years	55.8% (521)	61.6% (1,981)	<.001
Sex	—	—	
Female	33.0% (308)	20.2% (648)	
Male	67.0% (626)	79.8% (2,566)	<.001
Race/ethnicity	—	—	
White	69.4% (648)	67.6% (2,172)	
Black	12.9% (120)	13.7% (439)	
American Indian/Alaska Native	1.4% (13)	1.6% (50)	
Native Hawaiian/other Pacific Islander	0.4% (4)	0.3% (8)	
Asian	2.4% (22)	1.3% (43)	
More than one race	4.5% (42)	4.8% (153)	
Hispanic	9.1% (85)	10.9% (349)	.194
Family income	—	—	
<$20,000	11.5% (107)	9.3% (300)	
$20,000–$49,999	32.9% (307)	27.3% (877)	
$50,000–$74,999	18.0% (168)	20.2% (648)	
≥$75,000	37.7% (352)	43.2% (1,389)	<.001
Health insurance	—	—	
No	9.2% (86)	5.5% (176)	
Yes	90.8% (848)	94.5% (3,038)	<.001

Note. Chi-square tests were used to test for differences in distributions.

included as never-deployed/activated reserve veterans in the present study.

We included age, sex, race/ethnicity, family income, and whether or not the participant currently had health insurance coverage (no/yes) as covariates in our adjusted models. Given the known differences in alcohol consumption by age, sex, race/ethnicity, and income in the general population (SAMHSA, 2019b), as well as the observed differences in some of these variables by military service history in the present study, these demographic variables were included in our adjusted models to account for their potential confounding effects. Similarly, health insurance status is likely to affect where these veterans seek care (i.e., safety net provider vs. VA provider vs. other community-based provider), and health insurance status varied by military service history (never-deployed/activated reserve veterans vs. veterans with a history of active duty service/activation).

Statistical Analysis

We first used descriptive statistics to characterize this sample of veterans by military service history (Table 1). We then used logistic regression models to separately examine the effects of military service history (never-deployed/activated reserve veterans vs. active duty/deployed veterans) on being screened for alcohol use by a health care provider in the past year (Table 2), meeting DSM-IV criteria for alcohol abuse in the past year (Table 3), and meeting DSM-IV criteria for alcohol dependence in the past year (Table 4). *OR*s and 95% CIs are reported. Final models controlled for age, sex, race/ethnicity, family income, and health insurance status. AORs and 95% CIs are reported for adjusted models. All analyses were performed in 2020, incorporating the NSDUH sampling weights and controlling for complex clustered sampling using Stata version 15.1 (College Station, TX).

Table 2
Effect of Military Service History on Self-Reported Past-Year Alcohol Screening

Correlates of alcohol screening	Past-year alcohol screening	
	OR (95% CI)	A*OR* (95% CI)
History of active duty service/activation	—	—
No	Referent	Referent
Yes	**1.35* (1.05, 1.73)**	**1.40* (1.08, 1.84)**
Age		0.99 (0.89, 1.11)
Sex		—
Female		Referent
Male		**0.46*** (0.35, 0.60)**
Race/ethnicity		—
White		Referent
Black		**0.58*** (0.44, 0.77)**
American Indian/Alaska Native		0.43 (0.12, 1.56)
Native Hawaiian/other Pacific Islander		0.66 (0.13, 3.27)
Asian		0.88 (0.35, 2.23)
More than one race		1.12 (0.54, 2.29)
Hispanic		0.81 (0.54, 1.22)
Family income		**1.28** (1.12, 1.46)**
Health insurance		—
No		Referent
Yes		1.33 (0.90, 1.96)

Note. Boldface indicates statistical significance.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Results

Approximately 15% of the overall sample reported never being asked if they use alcohol in the past year, despite having at least one visit with a health care provider in an emergency room visit, overnight hospitalization, and/or outpatient visit. However, approximately 9% of the veterans in this national subsample met DSM-IV diagnostic criteria for past-year alcohol abuse or dependence, as measured by NSDUH questions assessing maladaptive patterns of drinking and clinically significant impairment or distress. Additional descriptive characteristics of the sample are presented in Table 1.

In our unadjusted model, active duty/deployed veterans had a greater odds of past-year alcohol screening by a health care provider than never-deployed/activated reserve veterans, *OR* = 1.35, 95% CI [1.05, 1.73]; Table 2. After accounting for the potential confounding effects of age, sex, race/ethnicity, family income, and health insurance status, active duty/deployed veterans still had a significantly greater odds of past-year alcohol screening by a health care provider than never-deployed/activated reserve veterans, A*OR* = 1.40; 95% CI [1.08, 1.84].

As shown in Table 3, there was no significant difference in the odds of meeting DSM-IV criteria for alcohol abuse in the past year between never-deployed/activated reserve veterans and active duty/deployed veterans in our unadjusted, *OR* = 1.16, 95% CI [0.63, 2.16], or adjusted model, A*OR* = 1.13, 95% CI [0.60, 2.13].

Similarly, never-deployed/activated reserve veterans and active duty/deployed veterans did not significantly differ in the odds of meeting clinical criteria for alcohol dependence in the past year, *OR* = 1.24, 95% CI [0.76, 2.02]; Table 4. There remained no significant difference in the odds of meeting DSM-IV criteria for past-year alcohol dependence between never-deployed/activated reserve veterans and active duty/deployed veterans after accounting for the potential confounding effects of age, sex, race/ethnicity, family income, and health care insurance status, A*OR* = 1.29, 95% CI [0.79, 2.13].

Discussion

Our findings provide compelling evidence that reserve veterans who have only ever served in a part-time capacity and were never deployed or activated are significantly less likely to be screened for alcohol use by a health care provider than active duty/deployed veterans, despite a similar prevalence in past-year alcohol abuse and dependence. Given the growing body of literature demonstrating that never-deployed service members are at similar risk for problems with alcohol and other substances as their previously deployed counterparts (Hoopsick et al., 2020; Hoopsick, Homish, Vest, et al., 2018; Trautmann et al., 2014), our findings are important because they illuminate disparate health care experiences based on military service history. This discrepancy may contribute to an under-recognition and under-treatment of alcohol problems among reserve veterans who were never deployed or activated, resulting in deleterious outcomes for this high-risk population. These findings illustrate the importance of utilizing SBIRT as an approach to

Table 3
Effect of Military Service History on Measured Past-Year Alcohol Abuse

Correlates of alcohol abuse	Past-year alcohol abuse	
	OR (95% CI)	A*OR* (95% CI)
History of active duty service/activation	—	—
No	Referent	Referent
Yes	1.16 (0.63, 2.16)	1.13 (0.60, 2.13)
Age		**0.81** (0.70, 0.93)**
Sex		—
Female		Referent
Male		**2.04* (1.09, 3.83)**
Race/ethnicity		—
White		Referent
Black		0.89 (0.43, 1.83)
American Indian/Alaska Native		0.75 (0.21, 2.74)
Native Hawaiian/other Pacific Islander		NA
Asian		0.58 (0.07, 4.52)
More than one race		1.67 (0.53, 5.31)
Hispanic		0.99 (0.46, 2.11)
Family income		1.05 (0.85, 1.29)
Health insurance		—
No		Referent
Yes		0.99 (0.43, 2.28)

Note. NA = not applicable. Zero Native Hawaiian veterans in study sample met criteria for alcohol abuse. Boldface indicates statistical significance
* $p < .05$. ** $p < .01$.

universal alcohol screening, regardless of patients' military service history.

The majority of veterans receive care outside of the VA system (Hinojosa et al., 2010; Straits-Troster et al., 2011). Given that reserve veterans who were never deployed or activated are generally ineligible for health care under the VA (Veterans Benefits Administration, 2012); our findings have implications for health care provided to veterans in civilian settings. Despite recommendations by NIAAA, USPSTF, and SAMHSA (2011) to universally screen all patients for risky alcohol consumption in primary and other health care settings, our results show that health care providers are less likely to screen certain veterans. This may be for two reasons. First, health care providers outside of the VA system do not regularly ask their patients about military service history, and therefore may not recognize veterans among their population (Vest, Kulak, et al., 2018). As a result, health conditions that are more prevalent in the veteran population, such as alcohol problems, may be missed. Second, even if patients' military service history is recognized, non-VA health care providers may need additional education on recommended next steps for care. A recent qualitative study examining the barriers to caring for veterans in civilian primary care settings suggests that civilian providers have limited insight into the possible health impacts of veteran status (Vest et al., 2019). Additionally, civilian primary care providers surveyed about veteran patient health indicated a desire for more information on the effects of combat deployment (Vest, Kulak, et al., 2018). Coupled with a dearth of research on never-deployed veterans, civilian health care providers may underestimate the effects of military service on the health of veterans who have never deployed.

In addition to our primary results, several other findings should be noted. Despite male veterans having a two-fold higher odds of meeting criteria for past-year alcohol dependence than female veterans, consistent with general population data (SAMHSA, 2019b), male veterans were significantly less likely to be screened for alcohol use by a health care provider than female veterans. This difference might be attributed to routine reproductive health visits among female veterans given that the American College of Obstetricians and Gynecologists (ACOG) recommends that all women seeking obstetric–gynecologic care should be screened for alcohol use at least yearly, and additionally during pregnancy (American College of Obstetricians and Gynecologists [ACOG], 2011). It should also be noted that while there were no significant differences between White veterans and veterans of other racial/ethnic groups in the odds of past-year alcohol abuse or dependence, our final model suggests that Black veterans were significantly less likely to have been asked about their alcohol use by a health care provider than White veterans. This effect may be the result of racial health care bias; studies have shown that Black patients are significantly less likely to receive preventive health screenings than White patients (Ahmed et al., 2017; Grzywacz et al., 2018). Greater income was also associated with a greater likelihood of past-year alcohol screening by a health care provider, but not with past-year alcohol abuse or dependence. Veterans living in poverty in this sample may have been more likely to seek care by safety net providers in hospital settings, resulting in a lower likelihood of alcohol screening. However, screening for alcohol problems in emergency department settings is not only recommended and feasible, but brief interventions delivered in this level of care have been shown to be effective

Table 4
Effect of Military Service History on Measured Past-Year Alcohol Dependence

Correlates of alcohol dependence	Past-year alcohol dependence	
	OR (95% CI)	A*OR* (95% CI)
History of active duty service/activation	—	—
No	Referent	Referent
Yes	1.24 (0.76, 2.02)	1.29 (0.79, 2.13)
Age		**0.84* (0.72,0.98)**
Sex		—
Female		Referent
Male		1.17 (0.75, 1.83)
Race/ethnicity		—
White		Referent
Black		0.98 (0.59, 1.63)
American Indian/Alaska Native		3.14 (0.97, 10.20)
Native Hawaiian/other Pacific Islander		NA
Asian		0.23 (0.04, 1.16)
More than one race		0.69 (0.24, 2.00)
Hispanic		0.87 (0.43, 1.77)
Family income		0.91 (0.73, 1.14)
Health Insurance		—
No		Referent
Yes		0.54 (0.28, 1.04)

Note. NA = not applicable. Zero Native Hawaiian veterans in study sample met criteria for alcohol dependence. Boldface indicates statistical significance.
* $p < .05$.

in reducing alcohol intake and preventing alcohol-related injuries (Barata et al., 2017).

Limitations

Despite the merits of this study, some limitations should be acknowledged. First, all data are self-reported so there is potential for response bias. However, computer-assisted self-interviewing techniques are a valid way to collect sensitive health data that is also preferred by respondents over standard interviewer-based survey administration (Willis et al., 2001). Second, as a cross-sectional analysis, we cannot draw any conclusions about the trajectories of alcohol use or related sequelae among these veterans. Third, the selection of independent, dependent, and control variables was limited to those included in the NSDUH dataset. As such, we were unable to examine military-specific contextual factors such as military branch, length of military service, or reason for military separation. Additionally, given that the NSDUH asks a single question regarding active duty service/activation, we were unable to examine for differences between veterans of the Active Component and veterans of the Reserve Component of the U.S. military that were grouped together within the active duty/deployed veterans group. Future studies designed to collect data in military samples could address these limitations. Importantly, we were also unable to examine details on the health care context (setting or provider type) in which screening occurred. Although some veterans in this study likely received care in VA settings while other veterans received care in community-based settings, we are unable to draw any causal inferences regarding the effect of health care context on the likelihood of being asked about alcohol use. However, reserve veterans who have never been deployed or activated are ineligible for health benefits under the VA, so it is likely that the majority of these veterans received care in community-based settings. More research is needed to understand the contexts in which health care providers have opportunities to screen veterans for alcohol use.

Clinical and Policy Implications

The present study demonstrates that although never-deployed/activated reserve veterans and active duty/deployed veterans did not significantly differ in past-year alcohol abuse and dependence, reserve veterans who have only ever served in a part-time capacity and were never deployed or activated are significantly less likely to be screened for alcohol use by a health care provider. These findings underscore the importance of engaging in SBIRT for all patients, especially in primary care settings where providers are adequately trained for conducting alcohol screening and have a support system for referrals or have integrated with behavioral health services. The findings also suggest that health care providers may need additional support to provide adequate care to veterans, including additional training on how military service affects veterans' health—including among veterans who have never been deployed or activated.

These results also have policy implications. Coupled with findings from previous research (Chapman et al., 2014; Hoopsick et al., 2020; Hoopsick, Homish, Bartone, et al., 2018; Trautmann et al., 2014), our findings demonstrate that all military populations risk may be at risk for problems with alcohol, not just those who have experienced combat. Expanded access under the VA system to all veterans regardless of deployment/activation history or whether their health conditions are service connected (directly or indirectly caused by, occurred during, or aggravated by military service) could improve veterans' access to health care providers with advanced knowledge in caring for the unique needs of military-connected patients. This change would have significant implications for reserve veterans who have never been deployed, given that they are currently ineligible for health benefits under the VA.

Conclusions

Results from the present study, conducted with recent data from a large national survey, show that reserve veterans who were never deployed or activated were significantly less likely to be screened for alcohol use in the past year by a health care provider than active duty/deployed veterans. However, the prevalence of meeting diagnostic criteria for past-year alcohol abuse and alcohol dependence was high among veterans and did not significantly differ by military service history. We recommend a universal screening approach, where all patients are asked about military service history and screened for alcohol use. Future research should focus on the health care experiences of veterans as well as health care provider knowledge, attitudes, and practices regarding veteran patients. Such research could inform the development and optimization of prevention and intervention efforts to improve health among this high-risk population.

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(*Appendix follows*)

Appendix

NSDUH Alcohol Abuse and Alcohol Dependence Criteria

Alcohol Abuse

To be classified with abuse of alcohol, a respondent must have met one or more of these alcohol abuse criteria in the past year and must not have been dependent upon alcohol in the past year:

1. Serious problems at home, work, or school caused by using alcohol, such as (a) neglecting their children; (b) missing work or school; (c) doing a poor job at work or school; and (d) losing a job or dropping out of school.
2. Used alcohol regularly and then did something that might have put you in physical danger.
3. Use of alcohol caused you to do things that repeatedly got you in trouble with the Law.
4. Problems with family or friends that were probably caused by using alcohol and continued to use alcohol even though you thought using alcohol caused these problems.

Alcohol Dependence

To be classified with alcohol dependence, a respondent must have met three or more of these alcohol dependence criteria:

1. Spent a great deal of time over a period of a month or more getting, using, or getting over the effects of alcohol.
2. Used alcohol more often than intended or was unable to keep set limits on alcohol use.
3. Needed to use alcohol more than before to get desired effects or noticed that same amount of alcohol use had less effect than before.
4. Inability to cut down or stop using alcohol every time tried or wanted to.
5. Continued to use alcohol even though it was causing problems with emotions, nerves, mental health, or physical problems.
6. Alcohol use reduced or eliminated involvement or participation in important activities.
7. Reported experiencing two or more alcohol withdrawal symptoms at the same time that lasted longer than a day after alcohol use was cut back or stopped. Symptoms include (a) sweating or feeling that heart was beating fast; (b) having hands tremble; (c) having trouble sleeping; (d) vomiting or feeling nauseous; (e) seeing, hearing, or feeling things that were not really there; (f) feeling like could not sit still; (g) feeling anxious; and (h) having seizures or fits.

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