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Military Factors Associated with Smoking in Veterans

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Military Factors Associated with Smoking in Veterans

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ABSTRACT Introduction: Given the high prevalence of smoking among Veterans and the economic, social, and clinical implications, it is important to understand the factors that contribute to smoking in order to focus efforts to mitigate these factors and improve smoking cessation efforts among Veterans. The availability of research on smoking in Veterans compared with civilians is limited given the military-specific differences in their life course. We aimed to identify military-specific factors combined with sociodemographic factors for ever smoking and current smoking among Veterans to inform future interventions. Materials and Methods: We used data from the 2010 National Survey of Veterans, the most current, to analyze the association of sociodemographic and military-specific factors with ever versus never smoking, and current versus past smoking using multiple variable logistic regression models (IRB#4125). Results: Among 8,618 respondents, the proportions of current, past, and never smokers were 17%, 48%, and 34%, respectively. Sociodemographic factors associated with ever smoking were female gender, educational attainment of less than a bachelor's degree, and being divorced/separated/widowed. Military-specific factors associated with ever smoking were exposure to dead/dying/wounded soldiers during service, and past, current, and unsure enrollment in Veterans Affairs healthcare. Never smoking was associated with Hispanic ethnicity, income over $75,000, and reporting fair or poor health. Military factors associated with never smoking were presence of a service-connected disability and military service July 1964 or earlier (i.e., pre-Vietnam). Among 5,652 ever smokers, sociodemographic factors associated with current smoking were age less than 65, being non-Hispanic black, educational attainment of less than a bachelor's degree, being divorced/separated/widowed, never married, and having no insurance. Factors associated with reduced likelihood of current smoking compared with past smoking included income $\geq$$41,000 and reporting fair or poor health. Military-specific variables associated with reduced likelihood of current smoking were service era of May 1975 or later (i.e., post-Vietnam) and 5 or more years of service. Conclusion: Military-specific variables are associated with smoking behaviors among Veterans. Findings from this study that exposure to dead/dying/wounded soldiers, service era, duration of service, service-connected disability status, and enrollment in VA care all influence smoking in Veterans, can inform prevention and cessation efforts in part by encouraging alternative healthy habits or cessation techniques in subgroups of Veterans with particular military backgrounds. By assessing risk factors in this unique population future research can leverage these findings to determine mechanisms that help explain these associations. Identifying factors associated with smoking offers insights for smoking cessation and prevention interventions given the military experiences and increased smoking incidence among Veterans.

INTRODUCTION

Smoking is the leading preventive cause of death in the USA as it is associated with increased risk of lung cancer and cardiovascular disease, among others.[1,2] Disparities in cigarette smoking in demographic subgroups based on ethnicity, education, and socioeconomic status (SES) have widened in the past decades despite overall decline in tobacco use.[3] National smoking rates for Veterans have declined about 15% from 2010 to 2015 as well, however, Veterans are still more likely to be current smokers compared with the civilian population.[4] Despite the availability of tobacco cessation programs in the Department of Veterans Affairs (VA) healthcare system, tobacco use remains "accepted, accommodated, and promoted" during active military service.[5] As a result, almost half (49%) of military service members report using nicotine in the past year.[6] This tobacco legacy within the military has significant consequences as VA has spent an estimated $2.7 billion on medical consequences of smoking in 2010.[7]

Almost one-third of current military members started smoking after joining the military.[8] Reasons for smoking initiation in the military are multifactorial including stress relief, sanctioned regular smoking breaks, and peer pressure.[9] Reasons for initiation may also be related to other military-specific factors such as exposure to traumatic events or increased stress of deployment. The Marine Corps has the highest current smoking rate at 30.8%, while the Air Force has the lowest at 16.7%.[6] A recent poll found that Army

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soldiers and Marine Corps members were equally as likely to serve in combat roles in Iraq or Afghanistan, and these rates were much higher than other branches. Soldiers and Marines were also much more likely to experience a "traumatic incident" during combat.[10] These findings could potentially point to the differing smoking rates among military branches if smoking is used to manage stress. Tobacco deterrence is reported less often in the Army and Marines,[6] which may also contribute to the different smoking rates.

Associations of social factors with smoking prevalence in Veterans are less well studied. However, there are several socioeconomic and racial disparities noted in the civilian literature. Lower socioeconomic status and education, unmarried marital status, American Indian/Alaska Native race, and poor health are all associated with an increased risk of smoking.[2,3] Non-Hispanic blacks were more likely to be smokers than other racial groups.[11]

Similarities exist between Veteran and civilian populations. Veterans who are current smokers are known to have lower incomes and be between the ages of 45–64, similar to civilians.[11] Military-specific factors that contribute to smoking behaviors in Veterans are unexplored. Given the high prevalence of current or ever smoking among Veterans and the economic implications, it is important to understand the factors that contribute to smoking in order to focus efforts to mitigate these factors and improve smoking cessation efforts among Veterans.

The aim of this study was to determine factors associated with ever or current smoking among Veterans using a national, comprehensive survey. As social determinants of health are increasingly noted as pathways toward health behaviors, the availability of research on smoking in Veterans using such variables is limited given the additional presence of military-specific differences in their life course. Our results focus on military-specific variables to obtain a comprehensive understanding of smoking behaviors in this high-risk population to inform interventions for both current and former service members.

METHODS

We conducted this IRB-exempt study (#4125) using data from the 2010 National Survey of Veterans (NSV),[12] the most recent available. Survey data collection and weighting methods are well established, validated, and have been described previously.[12] In brief, the 2010 NSV is the sixth in a series of national surveys for Veterans. The 2010 NSV was conducted using questionnaires mailed to Veterans regardless of their affiliation with VA healthcare. Data collection occurred from October 16, 2009–March 19, 2010. Veterans completed 8,710 surveys, with a response rate of 66.7% for the Veteran survey. Missing demographic values were imputed using hot deck imputation in the original dataset, although nonresponses were relatively rare.[12] We included all respondents who answered questions about smoking status (past, current, or never). In the first regression model, we defined ever smokers as past or current smokers and compared them to never smokers. In the second regression model, we compared current and past smokers excluding those who were never smokers.

The following covariates were included in models: age, gender, race/ethnicity, educational attainment, income, marital status, health insurance status, and self-reported health status. Additionally, we included military-specific covariates: exposure to dead/dying/wounded soldiers during service, branch of service, service era, duration of service (in years), presence of a service-connected disability, service-connected disability rating (amount of compensation paid for an injury/illness attributed to military service), and enrollment in VA care. All military-specific variables available in the survey were included in analyses. We included categories for "don't know" in two variables due to the importance of respondents' misunderstanding of their enrollment in VA care and service-connected disability rating.

Smoking Status

Smoking status as of 2010 was originally comprised of two questions including the following response categorical options to the questions, "How often do you smoke cigarettes?": every day, some days, not at all; and "Have you smoked at least 100 cigarettes in your lifetime?": yes, no. For the analysis, we used the first question to define current smokers and the second question to define ever smokers. There were few missing responses (0.9%), to either question, which were excluded. A comparison of respondent demographics based on missing responses to smoking questions justified their exclusion, as they were similar to those who completed the smoking questions.

Covariates

The covariates in the analysis were race/ethnicity (originally categorized into 11 self-report categories but collapsed into non-Hispanic White, non-Hispanic Black, Hispanic, and Other by the authors), gender (male, female), age category (<65, ≥65), marital status (married or civil union, divorced/separated/widowed, never married), insurance status (employer/purchased, Medicare/Medicaid/other government, VA/Tricare, Indian/Other, no insurance), income (<$40,000, $40–74,999, ≥$75,000), and educational attainment (high school or less, some college, BA or higher). In Model 2, we added general self-reported health status (at least good health/fair or poor health), exposure to dead/dying/wounded (response to the question "During your military service, were you ever exposed to dead, dying, or wounded people?": yes/no), branch of service (Army/Marines, Navy/Air Force/Coast Guard/Other Service), service era (July 1964 or earlier, August 1964–April 1975 (Vietnam era), May 1975–present), duration of service (1–4 yr, 5 or more years), presence of a service-connected disability (yes, no), service-connected disability rating (0–49%, 50–100%, unsure), and ever enrolled in VA care (yes, no).

Service-connected disability rating only includes those who responded "yes," to the prior question about the presence of a service-connected disability. We dichotomized branch of service as such given the higher smoking rates and rates of combat deployment in the Army and Marine Corps. Duration of service was dichotomized into less than or greater than 5 yr because a standard initial military contract is 1–4 yr and duration of service longer than this likely connotes a military career. In a sensitivity analysis, we included mental health/substance abuse hospitalization in past 6 mo (yes, no), and mental health/substance abuse outpatient counseling in past 6 mo (yes, no) to capture information about potential comorbid psychological conditions; results were unchanged.

We performed forward stepwise logistic regression modeling to determine the relationship between the explanatory variables and ever smoking compared with never smoking status. We utilized the same methods to determine the association with current compared with past smoking status. We used SPSS v20 (IBM) for analyses, employing $p < 0.05$ criterion for statistical significance.

RESULTS

The total number of survey respondents was 8,710 (66.7% response rate). Among the 8,618 (99%) of included Veterans who answered the questions regarding smoking status, 1,485 (17%) were current, 4,167 (48%) past, and 2,966 (34%) never smokers. Our cohort was largely non-Hispanic white (83%), male (94%), former Army (46.9%), and the plurality served in the Vietnam era (35.5%) (Table I).

Factors Associated With Ever Smoking

Factors associated with being an ever smoker were female gender (odds ratio (OR) 1.71, $p < 0.001$), educational attainment of less than a bachelor's degree (high school or less, OR 2.02, $p < 0.001$; some college, OR 1.78, $p < 0.001$), divorced/separated/widowed marital status (OR 1.19, $p < 0.05$), exposure to dead/dying/wounded soldiers (OR 1.24, $p < 0.01$), and enrollment in VA healthcare (OR 1.20, $p < 0.05$) or unsure of enrollment (OR 1.43, $p < 0.01$). Factors significantly associated with being a never smoker were Hispanic ethnicity (OR 0.55, $p < 0.001$), income >$75,000 (OR 0.79, $p < 0.01$), fair/poor health status (OR 0.72, $p < 0.001$), presence of a service-connected disability (OR 0.80, $p < 0.05$), and military service July 1964 or earlier (i.e., pre-Vietnam) compared with Vietnam era (OR 0.67, $p < 0.001$) (Table II: Model 1).

Factors Associated With Current Smoking

Among the 5,652 Veterans who were ever smokers (i.e., past and current), we found that age < 65 (OR 2.37, $p < 0.001$), being non-Hispanic black (OR 1.38, $p < 0.05$), educational attainment of less than a bachelor's degree (high school or less, OR 1.86, $p < 0.001$; some college, OR 1.62, $p < 0.001$), divorced/separated/widowed (OR 1.69, $p < 0.001$) or never married marital status (OR 1.92, $p < 0.001$), and having no insurance (OR 1.92, $p < 0.001$) were associated with increased likelihood of current smoking compared with past smoking. Factors associated with reduced likelihood of current smoking compared with past smoking included income ≥$41,000 ($41,000–74,999, OR 0.78, $p < 0.05$; >$75,000, OR 0.67, $p < 0.01$), fair/poor health status (OR 0.60, $p < 0.001$), military service May 1975 or later (i.e., post-Vietnam) (OR 0.31, $p < 0.001$), and 5 or more years of military service (OR 0.76, $p < 0.05$) (Table II: Model 2).

DISCUSSION

In a large, national cohort of Veterans, smoking behaviors were associated with military-specific variables that have important health implications. We also found that sociodemographic factors associated with smoking status in Veterans were similar to those observed in civilian populations. Historical tobacco availability from inclusion of cigarettes in rations from early service eras (until 1975) and current low prices of cigarettes on military bases likely contributes to smoking among Veterans. Over the past few decades military culture surrounding tobacco promotion has improved significantly, but smoking remains a significant problem among Veterans. Findings from this study that exposure to dead/dying/wounded soldiers, service era, duration of service, service-connected disability status, and enrollment in VA care all influence smoking in Veterans, can inform prevention and cessation efforts in part by encouraging alternative healthy habits or cessation techniques in subgroups of Veterans with a particular military background.

Ever Smoking

While the sociodemographic variables included match civilian population findings for having ever smoked, four military-related variables were also significant in this analysis. Military-related stress, as possibly related to our results regarding exposure to dead/dying/wounded soldiers during service, is likely a significant contributor for ever smoking among Veterans. Acute stress during service may lead to initiation of smoking but symptoms of stress generally decrease over time,[13] especially for those with a positive outlook,[14] meaning some military personnel may be more equipped to quit smoking after the acute stressors have ended. Indeed, military personnel may use tobacco to cope with stress,[15] and accordingly smoking prevalence is associated with combat deployment where exposure to dead/dying/wounded soldiers would occur.[16] Veterans have a high incidence of comorbidities such as post-traumatic stress disorder (PTSD), depression, and traumatic brain injury. In fact, 41% of all Veterans in care at VA have been diagnosed with either a mental health or behavioral adjustment disorder.[17] Although the limited mental health and substance abuse variables in our survey were not significant in our analyses, we believe military-related stress and the subsequent development of

TABLE I. Descriptive Statistics from the National Survey of Veterans

Characteristic	All Respondents 8,618	Current 1,485 (17.2)	Past 4,167 (48.4)	Never 2,966 (34.4)
Age				
<65	2,407 (28.5)	405 (27.9)	699 (17.1)	1,034 (35.6)
≥65	6,027 (71.5)	269 (18.6)	3,383 (82.9)	1,868 (64.4)
Gender, male	7,219 (93.6)	1,279 (93.6)	3,611 (96.1)	2,329 (90.0)
Race/Ethnicity				
Non-Hispanic White	6,906 (83.0)	1,136 (78.9)	3,451 (85.5)	2,319 (81.5)
Non-Hispanic Black	502 (6.0)	143 (9.9)	167 (4.1)	192 (6.8)
Hispanic	373 (4.5)	66 (4.6)	141 (3.5)	166 (5.8)
Other/Mixed	540 (6.5)	94 (6.5)	279 (6.9)	167 (5.9)
Educational attainment				
High school or less	2,680 (31.6)	609 (41.6)	1,407 (34.3)	664 (22.8)
Some college	3,204 (37.8)	655 (44.8)	1,536 (37.5)	1,013 (34.8)
Bachelors or advanced degree	2,589 (30.6)	199 (13.6)	1,154 (28.2)	1,236 (42.4)
Annual income, U.S. dollars				
<41,000	3,242 (40.5)	764 (54.5)	1,574 (40.8)	904 (33.0)
41–74,999	2,567 (32.1)	421 (30.0)	1,295 (33.5)	851 (31.0)
>75,000	2,196 (27.4)	217 (15.5)	991 (25.7)	988 (36.0)
Marital status				
Married/Civil union	6,250 (73.7)	873 (60.0)	3,164 (77.0)	2,213 (75.8)
Divorced/Separated/Widow	1,741 (20.5)	440 (30.2)	796 (19.4)	505 (17.3)
Never married	495 (5.8)	143 (9.8)	149 (3.6)	203 (6.9)
Current insurance				
Medicare/Medicaid/Other government	2,962 (34.8)	330 (22.4)	1,727 (42.0)	905 (30.9)
Employer or self-purchase	2,823 (33.2)	506 (34.4)	1,188 (28.9)	1,129 (38.6)
VA/Tricare/Military health	1,786 (21.0)	316 (21.5)	866 (21.1)	604 (20.6)
Indian health service or other	282 (3.3)	38 (2.6)	152 (3.7)	92 (3.1)
None	659 (7.7)	281 (19.1)	181 (4.4)	197 (6.7)
Health status				
At least good	6,054 (71.0)	858 (58.5)	2,875 (69.7)	2,321 (79.1)
Fair or poor	2,473 (29.0)	608 (41.5)	1,251 (30.3)	614 (20.9)
Exposure to dead/Dying/Wounded soldiers	3,063 (36.3)	608 (42.1)	1,496 (36.5)	959 (33.0)
Branch of service				
Army	3,975 (46.9)	719 (49.5)	1,938 (47.2)	1,318 (45.2)
Navy	1,892 (22.3)	290 (20.0)	965 (23.5)	637 (21.8)
Air force	1,674 (19.8)	244 (16.8)	781 (19.0)	649 (22.2)
Marines	782 (9.2)	182 (12.5)	336 (8.2)	264 (9.1)
Coast guard/Other	148 (1.7)	17 (1.2)	82 (2.0)	49 (1.7)
Service era				
Jul 1964 or earlier	2,856 (33.7)	217 (15.0)	1,788 (43.5)	851 (29.2)
August 1964–April 1975 (Vietnam)	3,012 (35.5)	623 (42.9)	1,494 (36.4)	895 (30.7)
May 1975 or later	2,605 (30.7)	611 (42.1)	826 (20.1)	1,168 (40.1)
Duration of service				
1–4 yr	5,956 (72.7)	1,016 (72.3)	3,019 (75.9)	1,921 (68.5)
≥5 yr	2,232 (27.3)	390 (27.7)	959 (24.1)	883 (31.5)
Service-connected disability, yes	1,406 (16.3)	291 (19.6)	618 (14.8)	497 (16.8)
Ever enrolled in VHA care				
No	5,667 (66.4)	824 (55.8)	2,784 (67.4)	2,059 (70.2)
Yes	2,300 (26.9)	516 (35.0)	1,095 (26.5)	689 (23.5)
Don't know	574 (6.7)	136 (9.2)	251 (6.1)	187 (6.4)

Note. Expressed as *N* (%); percents are of non-missing data; all variables had <5% missing, except duration of service (5.1%); BA, bachelor of arts degree; VA, Department of Veteran's Affairs; NA, not applicable; some variables included a "don't know" category of <1% and were not included.

mental illness likely contribute to the high smoking rates among Veterans. Exposure to combat trauma is likely a strong indicator of development of psychological conditions like PTSD[18] which are associated with tobacco use.[19,20]

Those in earlier eras of service (pre-Vietnam) are also less likely to have ever smoked. Those from earlier eras may not have experienced the same challenges as Vietnam era Veterans in regard to the unique combat conditions and much higher prevalence of PTSD and other psychological problems.[21] Therefore, they may have not felt the need to initiate smoking. However, this finding may also be a relic of immortality bias, as discussed in the limitations below. With the prevalence of psychological disorders like PTSD in the service, especially for Vietnam era Veterans, military

TABLE II. Logistic Regression of Ever and Current Smoking Status in Veterans

Characteristic	Ever vs. Never Smoking (n = 8,618)		Current vs. Past Smoking (n = 5,652)	
	Exp(B)	(95% CI)	Exp(B)	(95% CI)
Age				
≥65	—	—	—	—
<65	1.01	(0.82, 1.24)	**2.37**	(1.83, 3.06)
Gender				
Male (ref)	—	—	—	—
Female	**1.71**	(1.36, 2.15)	1.16	(0.82, 1.66)
Race/Ethnicity				
Non-Hispanic White (ref)	—	—	—	—
Non-Hispanic Black	0.98	(0.76, 1.25)	**1.38**	(1.01, 1.87)
Hispanic	**0.55**	(0.42, 0.72)	0.99	(0.67, 1.47)
Other/Mixed	0.85	(0.65, 1.10)	0.94	(0.66, 1.32)
Educational attainment				
High school or less	**2.02**	(1.73, 2.37)	**1.86**	(1.46, 2.38)
Some college	**1.78**	(1.55, 2.04)	**1.62**	(1.29, 2.04)
BA or advanced degree (ref)	—	—	—	—
Annual income, U.S. dollars				
<41,000 (ref)	—	—	—	—
41,000–74,999	0.98	(0.85, 1.14)	**0.78**	(0.64, 0.95)
>75,000	**0.79**	(0.67, 0.93)	**0.67**	(0.52, 0.86)
Marital status				
Married/Civil union (ref)	—	—	—	—
Divorced/Separated/Widow	**1.19**	(1.02, 1.38)	**1.69**	(1.40, 2.04)
Never married	0.86	(0.67, 1.09)	**1.92**	(1.39, 2.66)
Current Insurance				
Medicare/Medicaid/Gov't (ref)	—	—	—	—
Employer or self-purchase	0.86	(0.72, 1.02)	1.05	(0.82, 1.35)
VA/Tricare/Military health	0.91	(0.75, 1.11)	0.96	(0.74, 1.22)
Indian health service or other	0.93	(0.67, 1.28)	0.73	(0.44, 1.21)
No insurance	1.07	(0.81, 1.41)	**1.92**	(1.40, 2.63)
Self-reported health status				
At least good (ref)	—	—	—	—
Fair or poor	**0.72**	(0.63, 0.83)	**0.60**	(0.50, 0.71)
Exposed to dead/Dying/Wounded soldiers				
Yes	**1.24**	(1.10, 1.41)	1.12	(0.94, 1.32)
Branch of service				
Army/Marines (ref)	—	—	—	—
Navy/Air Force/Coast Guard/Other	1.04	(0.92, 1.61)	0.92	(0.78, 1.08)
Service era				
Jul 1964 or earlier	**0.67**	(0.54, 0.82)	1.16	(0.88, 1.52)
Aug 1964–April 1975 (Vietnam) (ref)	—	—	—	—
May 1975 or later	0.93	(0.78, 1.10)	**0.31**	(0.25, 0.40)
Duration of service				
1–4 yr (ref)	—	—	—	—
≥5 yr	0.98	(0.85, 1.14)	**0.76**	(0.62, 0.94)
Service-connected disability				
Yes	**0.80**	(0.67, 0.95)	0.91	(0.72, 1.15)
Ever enrolled in VA care				
No (ref)	—	—	—	—
Yes	**1.20**	(1.02, 1.40)	1.19	(0.97, 1.46)
Don't Know	**1.43**	(1.12, 1.82)	1.17	(0.86, 1.58)

Note: Expressed as *N* (%); percents are of non-missing data; all variables had <5% missing, except duration of service (5.1%). All boldfaced values are significant at $p < 0.05$.

culture and VA could be modified to provide and encourage healthy, alternative ways to manage stress and avoid the desire to start (or continue) smoking, as other military factors are largely unmodifiable. Interventions to prevent or stop smoking may be more helpful at the time of stressful events rather than upon military discharge given the heightened risk of symptoms of stress (like smoking) immediately after or during a stressful event. When taking military histories, healthcare providers can request more information on potential risks for smoking like duration of service and service

era, or cessation resources may be tied in more closely with mental health consults.

Current Smoking

Our findings regarding Veterans' sociodemographic factors are similar to previous research identifying risk factors for current smokers in the civilian population. For example, Veteran age was significant for current smoking where younger Veterans are more likely to currently smoke. These results support previous findings that current cigarette smoking is more common among those under 65.[2] Additionally, smoking rates among older Veterans have been found to be similar to the general senior population, and 68% of military retirees reported they were former smokers, perhaps implying Veterans are incorporating healthier behaviors as they age.[22] We also found that marital status (i.e., married or having a partner) was an important characteristic for successful cessation as unmarried individuals may lack the support or motivation needed to quit.[23]

Importantly, two military-specific factors were associated with past (service era and service duration), but not current smoking which may indicate that Veterans are more prepared to quit smoking after the day-to-day stress of a military career has ended. Service era was a significant risk factor with more recent eras being less likely to currently smoke, possibly due to the removal of cigarettes from rations or initiatives by the military for smoking cessation. Career military members may have favorable sociodemographic variables, like higher SES, that contribute to smoking cessation since they may have higher incomes, better education, more prestigious military or civilian occupations, more stable access to healthcare, or are required to sustain a more active lifestyle. Military personnel on shorter contracts can be more closely monitored during their tour for presence of continued or increased smoking behaviors. Incorporating sociodemographic as well as military-specific information gathered at annual primary care visits may provide more sights into current and past smoking behaviors and inform smoking cessation interventions at VA facilities. This information can also be gleaned from medical or service records to help identify Veterans most in need of cessation resources, even those not enrolled in VA healthcare.

Treatment of comorbid conditions like PTSD, depression, or pain, can aid in smoking cessation.[24] These comorbidities decrease the ability of Veterans to access resources needed for smoking cessation and healthy behaviors. Veterans enrolled in VA healthcare may have access to more resources to aid in smoking cessation after military service than those not enrolled. However, this and previous studies found VA users were more likely to have ever smoked.[25] Accordingly though, we found that Veterans with no insurance are more likely to be current smokers. Important variables not available from our survey may account for this discrepancy, or it may be that those enrolled in VA healthcare have lower SES and other important social factors contributing both to their ever smoking behavior and need for VA care.

This study has limitations. Female and non-white Veterans are under-represented in the cohort; however, survey data were weighted per Veteran population demographics. There were no data on time since military service or on pack-years available, possibly influencing smoking persistence. Self-reported survey data are subject to recall and response bias. We also acknowledge a potential immortality bias since many of the responders are older than 65 and smoking-related mortality may influence results in older populations. Additionally, secular changes in smoking and military make-up such as availability and price of cigarettes, presence combat exposures, and increasing numbers of females are not accounted for.

Military-specific variables are associated with smoking behaviors among Veterans. These descriptive results offer important insights into factors that contribute to ever and current smoking among Veterans, which may enhance the development of targeted interventions to both active military personnel as well as Veterans. By assessing risk factors in this unique population, future research can leverage these findings to determine mechanisms that help explain these associations. Smoking remains a significant public health issue in the US, especially among Veterans, that contributes to substantial morbidity and mortality. These findings have important future implications for the health of Veterans.

CONFLICT OF INTEREST STATEMENT

All authors declare no conflicts of interest with the work presented in this manuscript.

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