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PEER AND ROLE MODEL INFLUENCES FOR CIGARETTE SMOKING IN A YOUNG ADULT MILITARY POPULATION

Kathy J. Green, Christine M. Hunter, Robert M. Bray, Michael Pemberton, and Jason Williams Kathy J. Green, M.D., United States Air Force, Bolling AFB, DC; Christine M. Hunter, Ph.D., Division of Diabetes, Endocrinology, and Metabolic Diseases, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD; and Robert M. Bray, Ph.D., Michael Pemberton, Ph.D., and Jason Williams, Ph.D., RTI International, Research Triangle Park, NC

Abstract

Previous research has shown that 8% to 10% of nonsmokers initiated smoking during their first year of military service despite a period of forced abstinence during boot camp. To our knowledge, no studies have looked at the influence of peers and role models on the initiation of smoking among U.S. Air Force personnel who recently completed boot camp. This cross-sectional study examined the role of perceived peer norms, roommate influence, role model influence, perceived norms of all active duty personnel, and depressive symptoms in the initiation and reinitiation of smoking among 2,962 Air Force technical training students. Previous nonsmokers were more likely to initiate smoking if they perceived that the majority of their classmates smoked (OR 1.67, 95% CI [1.05 to 2.67]) and if they reported that their military training leader or classroom instructor used tobacco products (OR 1.69, 95% CI [1.12 to 2.56]). Additionally, previous nonsmokers were more likely to initiate smoking if their roommate smoked (OR 1.67, 95% CI [1.09 to 2.56]). Similar results were seen with previous smokers who perceived that the majority of their classmates smoked (OR 1.63, 95% CI [1.03 to 2.58]) and if they reported that their military training leader or classroom instructor used tobacco products (OR 1.95, 95% CI [1.29 to 2.94]). Our study suggests that military role models who use tobacco, peer smoking behavior, and perceived smoking norms increase the likelihood of smoking initiation among newly enlisted military personnel who have recently undergone a period of forced abstinence.

Introduction

Smoking is a major public health concern (U.S. Department of Health and Human Services [DHHS], 2004), particularly in young adults between the ages of 18 and 25. In a 2005 national survey, 39% of young adults in the United States indicated that they had smoked in the past month (Substance Abuse and Mental Health Services Administration [SAMHSA], 2006) which is considerably higher than rates seen in other age groups. Most initiation of cigarette smoking occurs by the age of 21 (Chassin, Presson, Rose, & Sherman, 1996; Chen & Kandel, 1995; Fritz, 2000; U.S. DHHS, 1994), and smoking cessation efforts in adolescent or young adult populations have been generally less successful than programs for adults (Colby et al., 1998; Milton, Maule, Backinger, & Gregory, 2003; Robinson et al., 2003). Thus, improved

Correspondence: Kathy J. Green, M.D., Deputy Chief, Health Promotion Operations, Air Force Medical Operations Agency, Office of the Surgeon General, 110 Luke Avenue, Room 405, Bolling AFB, DC 20032-7050, USA. Tel: +1 (202) 767-0187; Fax: +1 (202) 404-8089; Email: kathy.green@pentagon.af.mil.

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prevention and cessation efforts that target young adults are crucial to address this important public health issue. In particular, identifying personal and social factors that increase risk may allow for improved design of prevention and intervention approaches for this population (Backinger et al., 2003; Buller et al., 2003; Henningfield & Michaelides, 2000).

The military provides an opportune platform for examining factors related to smoking in this age group because large numbers of young adults join the service each year. For example, the U.S. Air Force (USAF) brings in about 20,000 new members every year between the ages of 18 and 25 years (About, Inc., 2007). The military is also an important population for study because, in addition to the known health risks, there is evidence that smoking decreases military readiness (Conway & Cronan, 1992; Jensen, 1986; Robbins et al., 2000) and has been shown to be predictive of early discharge (Klesges, Haddock, Chang, Talcott, & Lando, 2001). Data from the 2005 Department of Defense (DoD) Survey of Health Related Behaviors revealed that 42.8% of military personnel aged 20 or younger were current smokers, as were 41.0% of personnel aged 21 to 25 (Bray et al., 2006). Furthermore, 38.8% of young adults aged 18 to 25 who were current smokers initiated smoking after joining the military (Bray et al., 2006).

This rate of smoking initiation is of particular concern given that a significant proportion of these individuals are making the decision to initiate smoking at a later age than their civilian counterparts (Lantz, 2003; U.S. DHHS, 1994). When individuals first enter the USAF, they are required to abstain from smoking during basic military training, also referred to as "boot camp." Following basic training, new recruits enter USAF technical training where they are trained in a vocational skill. As training progresses, military members are gradually given more freedom and have fewer restrictions on smoking. It is during this first year of military service that many previously nonsmoking individuals seem to be making the decision to start smoking. Previous research has shown that 8% to 10% of nonsmokers initiated smoking during their first year of military service (Klesges, Haddock, Lando, & Talcott, 1999; Klesges et al., 2006). Although these rates are somewhat lower compared with young adults in the civilian sector, their occurrence following a period of forced abstinence presents a unique situation for study (Lantz, 2003). If we can understand what factors contribute to this delayed decision to initiate smoking, we can develop more appropriate prevention and cessation interventions for young adults in the military.

One possible factor that could explain the relatively high incidence of smoking initiation following basic training is the modeling of smoking by peers, roommates, or military leaders. Social norms and peer and parental influence have been shown to predict smoking initiation in nonmilitary young adults (Buller et al., 2003; Buttross & Kastner, 2003; Conley Thompson, Siegel, Winickoff, Biener, & Rigotti, 2005; Fritz, 2000; Griesler, Kandel, & Davies, 2002; Hunter, Hayes, Brehm, & Bennett, 2000; Jackson, 1997; Killen et al., 1997). In a prospective cohort study by Killen et al. (1997), peer influence (defined as friends who smoke) was the most important predictor for the initiation of smoking among high school students. When compared with children who did not smoke, those who had started smoking in late childhood reported more exposure to both parents and friends who smoked (Jackson, 1997). In looking specifically at a young military population, data from Hunter et al. (2000) suggest that professional role models, such as military instructors, may also influence smoking status. For example, in their study, students who indicated that their military training leader or instructor smoked were 2.5 times more likely to smoke than those who said their military training leader or instructor did not smoke.

Social influences may be especially prominent among USAF technical training students because they spend a significant portion of their time together, especially during the first 30 days of training when they are restricted from leaving the military base. Students are also required to live in the base dormitory with one or more assigned roommates, which often results

in smokers and nonsmokers being housed together. Military instructors play an important role in shaping new military members because this population perceives them as leaders and role models. Although a number of studies have looked at various factors that may influence smoking, there has been little research into the social factors that may influence young military adults to smoke—a population at particularly high risk for smoking (Bray et al., 2006). The current study allows for an examination of multiple social factors that may be associated with smoking in a large sample of young military adults. The primary hypothesis was that young USAF personnel who perceive that peers and role models smoke would be more likely to initiate or reinitiate cigarette use than those who do not perceive that peers and role models smoke.

Methods

Participants and Procedures

This cross-sectional study utilized baseline data from a prospective cohort study assessing alcohol and tobacco use among USAF junior enlisted technical training students. The 120-item questionnaire was administered at four USAF training bases from April 16 to May 14, 2005. All technical training students aged 18 years or older at these bases were eligible to participate. This study used only those aged 18 to 36 to include only those who could have recently completed basic training, which excluded three respondents. Data were collected from groups of 100 to 300 persons by civilian researchers who explained the procedures and the voluntary nature of participation. No military personnel were in the room other than the respondents as the questionnaires were completed. A total of 2,962 out of 4,505 (65.7% response rate) eligible technical training students completed the questionnaire. All study methods and materials were approved by institutional review boards (IRBs) at RTI International and the Air Force and Army Surgeons General.

Measures

Demographic and control variables

Measures of demographics were taken from the DoD Survey of Health Related Behaviors (HRB Survey) (Bray, 2006). Gender, age, and education level were assessed using single, selfreport items. Race/ethnicity was assessed using two items, one that asked if the participant was of Spanish/Hispanic/Latino origin or descent, and a second that asked for racial group. Because few respondents classified themselves as nonwhite or white and Hispanic, race/ethnicity was dichotomized into whites and others. Length of time in training was assessed using a single item and was dichotomized into 44 days or less and 45 days or more. This cutoff marks the time during training when smoking restrictions on Air Force trainees are lifted. Family history of smoking was assessed using a single item that asked if any family members smoked every day or almost every day when the respondents were growing up. Religious influence was assessed using a single item that asked if religious/spiritual beliefs influence how participants make decisions in their life. Symptoms of depression were assessed using the five-item version of the Center for Epidemiological Studies Depression scale (Shrout & Yager, 1989). Questions asked how often in the past week participants (1) felt that they could not shake off the blues even with help from family or friends, (2) felt depressed, (3) felt lonely, (4) had crying spells, or (5) felt sad. Responses ranged from 0 (rarely or none of the time) to 4 (most or all of the time) and are summed across items with scores greater than 4 indicating presence of depressive symptoms. A depressive symptom indicator was used in the analyses by dichotomizing at this cut point.

Cigarette use and alcohol use variables

Measures of cigarette smoking and pre-military alcohol use were adapted from the DoD HRB Survey (Bray et al, 2006) to ensure comparability with previously published studies on military populations. Previous cigarette smoking was assessed using a single item that asked about the number of cigarettes that participants had smoked in the month before basic training. Participants who had smoked in the month before basic training were classified as previous (pre-military) smokers. Current smoking was assessed using a single item that asked participants to describe their cigarette smoking since the end of basic training. Participants who had smoked during the time since the end of basic training were classified as current smokers. Pre-military alcohol use was assessed with a single item that asked about the frequency of drinking in the month before basic training, which was then dichotomized to indicate any alcohol use or no use.

Perceived norms, roommate, and role model influence variables

Two measures of perceived normative smoking rates were used. The first measured perceived smoking in respondents' peers. Peer norms were assessed using a single item that asked for an estimate of the percentage of classmates who had smoked cigarettes during their time in technical training. This measure was dichotomized into those who estimated that more than half of their peers had smoked and those who estimated that one half or fewer of their peers had smoked. The second norm measure assessed perceptions of smoking by "permanent party" military personnel (all active duty personnel who are not in technical training), and was a single item that asked for an estimate of the percentage of those who regularly smoke cigarettes. This permanent party norm was also dichotomized into those who estimated that more than half of permanent party personnel smoked regularly and those who estimated that one half or fewer of permanent party personnel smoked regularly.

Roommate influence was assessed using a single item that asked if their roommate smoked (yes/no). If respondents had more than one roommate, they were asked to respond about the roommate with whom they spent the most time.

Role model influence was assessed using two questions, one that asked if any of the respondent's military training leaders used tobacco products and one that asked if any of the respondent's classroom instructors used tobacco products. These items were combined into a single measure of the influence of role models that indicated if a respondent's military training leaders and/or classroom instructors used tobacco products.

Data Analysis

Initial examination of the control and predictor variables revealed considerable incomplete data across the set of items. Simply using listwise deletion resulted in a loss of approximately 46% of cases and an attendant loss of power and possible introduction of estimate bias. To deal with missing data on nonoutcome items, multiple imputation (Rubin, 1987; Schafer, 1997) was used to generate a number of datasets with plausible values for missing items drawn from the multivariate conditional distribution of all predictors. Multiple imputation was performed with SAS PROC multiple imputation, and the multiple imputation analysis option in Mplus (Muthen & Muthen, 2007) was used to analyze models of interest across the MI datasets and combine parameter estimates according to standard rules (Rubin, 1987). Diagnostics suggested that five multiple imputation datasets were sufficient. Unless otherwise noted, all estimates given in text or tables are based on multiple imputation analyses.

The adjusted associations between the predictors and smoking outcomes were estimated as a multinomial regression model with the nominal categories of nonsmoker (no smoking before or after basic training), quitter (smoked before basic training but not after), initiator (did not

smoke prior to basic training but began afterward), and reinitiator (smoked before basic training and resumed smoking after the prohibition period). Two functionally equivalent models were run with different reference groups to yield the desired comparisons for previous nonsmokers (pre-basic nonsmokers to new initiators) and previous smokers (reinitiators to quitters). These models included the following control variables: age, gender, race/ethnicity, education, length of time in training, family history of smoking, alcohol use prior to basic training, religious influence, and depressive symptoms. Primary predictors included peer norms, permanent party norms, roommate influence, and role model (military training leader and/or classroom instructor) influence. Estimates from the models were transformed from logit-based metric to odds ratios and 95% confidence intervals.

Results

Participant characteristics are shown in Table 1. Means and proportions are given for both the raw data with missing information and for estimates derived from the multiple imputation data. Raw counts are omitted from the multiple imputation data results because they may differ across imputed datasets. The depression, peer norms, permanent party norms and roommate influence measures showed a considerable proportion of missing values prior to multiple imputation. Exploratory analyses indicated that the missing values were likely Missing At Random (MAR), and so the MI-based estimates were unbiased and allowed retention of the maximum sample. However, due to the large percentage of missing values for these items, their parameter estimates for impact on smoking were consequently less efficient (i.e., had larger standard errors).

Smoking Status Pre-and Post-Basic Training

Among the total sample of 2,962, 807 participants (27.3%) had smoked in the 30 days before basic training. Current smoking (smoking in the past 30 days) was reported by 9.0% of those who were not smokers before basic training and by 64.4% of those who were smokers before basic training.

Multinomial Regression Models of Smoking Status

Previous nonsmokers—Table 2 presents the odds ratios and 95% confidence intervals from the multinomial regression models of smoking status for respondents who were not smokers before joining the military (previous nonsmokers). These data show the odds of participants initiating cigarette smoking for the first time following basic training.

Among previous nonsmokers, participants who perceived that the majority (over 50%) of their classmates smoked during their time in technical training were significantly more likely to initiate smoking compared with those who perceived that 50% or fewer of their classmates smoked during training. In addition, previous nonsmokers who lived with a roommate who smoked were more likely to initiate cigarette use compared with those who did not live with a roommate who smoked. Finally, previous nonsmokers who reported that their military training leaders and/or classroom instructors used tobacco were significantly more likely to initiate cigarette use compared that these role models did not smoke. Perceived permanent party norms was not a significant predictor of smoking initiation.

An examination of the control variables indicates that whites were more likely than others to have initiated tobacco use following basic training, as were those who were not under an enforced smoking ban (had been in training for more than 44 days) and those who were alcohol users before joining the military.

Previous smokers—Table 2 also presents the odds ratios and 95% confidence intervals from the multinomial regression models of smoking status for respondents who were smokers

The results for previous smokers were similar to the results for previous nonsmokers. Previous smokers with military training leaders and/or classroom instructors who used tobacco were almost twice as likely to reinitiate smoking. Previous smokers who perceived that the majority of their classmates smoked were also more likely to reinitiate smoking, although this influence was not as strong as that seen among previous nonsmokers. Roommate influence and perceived permanent party norms were not significant predictors of smoking reinitiation.

An examination of the control variables indicates that previous smokers were more likely to reinitiate smoking after basic training if they were not under a smoking ban, if they had used alcohol in the month before basic training, and if they had symptoms of depression.

Discussion

Our study found that social and role model influences were clearly associated with the initiation and reinitiation of smoking in this population of young military adults. These factors were significant predictors of smoking status even after adjusting for other known risk factors in the model, such as family history of smoking, alcohol use, and depressive symptoms. Further, these results suggest that social role models were more predictive of smoking (Taylor, Conard, Koetting O'Byrne, Haddock, & Poston, 2004) in this population of young adults than traditionally predictive demographic factors, such as age, gender, and education level (Eaton et al., 2006).

The strongest social influence was that of the military training leaders and classroom instructors. Our findings indicate that perceptions of leaders' tobacco use are associated with smoking initiation and reinitiation in these young adults. The role of professionals in perpetuating the belief that smoking is a culturally accepted and encouraged behavior in the military increases the risk for smoking among newly enlisted personnel. These young adults may believe that if their military role models smoke, then it must be a socially acceptable behavior despite prominent USAF antismoking messages and policies. These findings seem to mirror the associations seen between parental smoking habits and young adult smoking behavior (Buller et al., 2003).

Our study also found that peer norms played a strong role in the initiation and reinitiation of smoking. Despite the fact that only 32% of young adults in this population smoke cigarettes (Bray et al., 2006; Bray & Hourani, 2007), respondents who were smokers perceived this percentage to be much higher. The close-knit nature of the military student population and the fact that smokers are more visible as they are required to smoke in designated outdoor locations may have contributed to the perception that the majority of students smoke. Even though this perception is incorrect, the belief appears to be most powerful for those who are most vulnerable to initiate or reinitiate smoking. This finding is consistent with the literature that salient peer models and social norms are some of the strongest influences on the initiation of smoking (Buller et al., 2003; Kandel, Kiros, Schaffran, & Hu, 2004; Killen et al., 1997; Maxwell, 2002; Urberg, Degirmencioglu, & Pilgrim, 1997). Interestingly, although technical training students who were smokers were more likely to perceive that the majority of their classmates smoked, they did not hold this same perception toward permanent party personnel. This may be partially explained by the relative separation of students and permanent party personnel. Students are housed on a separate part of the military bases, and social interaction is highly discouraged between permanent party personnel and students. As such, the proximity and perceived similarity of the social role models may influence the impact of the model on one's

behavior and may help to explain these differences (Kandel et al., 2004; Maxwell, 2002; Urberg et al., 1997).

Having a roommate that smoked was predictive of initiation of smoking among previous nonsmokers, but was not predictive of reinitiation of smoking among those who had smoked previously. It may be that the presence of a smoking roommate may be enough of an influence to tempt a nonsmoker to try smoking, whereas for those who have a history of smoking other factors, including addiction, outweigh the influence of a smoking roommate.

Several factors that were used as control variables were found to be significant predictors of smoking, including race/ethnicity, pre-military alcohol use, whether the personnel were under an enforced ban on smoking, and depression. Based on existing literature, it is not surprising that previously using alcohol or being white resulted in greater likelihood to initiate or reinitiate smoking in these young adults (Ames, Cunradi, & Moore, 2002; Eaton et al., 2006; Griesler et al., 2002; Haddock, Klesges, Talcott, Lando, & Stein, 1998; Klesges et al., 1999; Voorhees, Schreiber, Schumann, Biro, & Crawford, 2002). Although we did not collect data during basic training, other researchers have indicated that smoking in basic training is virtually nonexistent due to a strict ban (Klesges et al., 2006). This is consistent with our finding that the existence of a smoking ban was the strongest predictor of smoking, which demonstrates that early training restrictions are beneficial in reducing smoking. However, as smoking restrictions for military students are relaxed, personnel are at increased likelihood to smoke. It may also be that once permitted to smoke, general messages from the public and the Air Force about the harms of smoking are disregarded. Depression was more predictive of reinitiation than initiation of smoking. This is consistent with findings about the link between depression and smoking where depression has predicted greater relapse to smoking and lower long-term abstinence rates (Burgess et al., 2002; Niaura et al., 2001).

These findings have important implications for smoking prevention and early smoking cessation intervention efforts. The findings that smoking behavior by role models and norms about peer smoking both increase the likelihood of smoking suggest that changing role models' smoking behavior and modifying (possibly inaccurate) perceptions of who smokes may help reduce smoking initiation or reinitiation. Role models and peers might be used to highlight more accurate social norms, promote a nonsmoking norm, or help with early cessation efforts. In addition, the finding that those who have been in training longer are more likely to smoke suggests that restrictions on smoking during earlier weeks of training may be reasonably successful, but when restrictions are lifted, personnel are more likely to initiate or reinitiate smoking. It could be that another method to decrease smoking rates among young military personnel is to increase the time period that smoking is not permitted.

One of the strengths of this study is that it was one of the first to evaluate the relative contributions of multiple social influences to smoking initiation among large numbers of USAF technical training students. This study included the four largest technical training bases in the USAF and we feel that our results provide a reasonably accurate representation of this population. However, the fact that this study was limited to USAF military personnel may affect the ability to generalize the results to other military services and the civilian sector.

One of our study's limitations is the amount of missing data; however, this was addressed through multiple imputation. The length of the survey may have accounted not only for the missing data but also for our response rate. It is also important to note that the cross-sectional nature of these data prevent any solid conclusions about the causal order of the association between perceptions of peer and role model smoking and the initiation/reinitiation of smoking. For example, it could be that these findings resulted from the "false consensus effect," or the tendency for individuals to overestimate the degree to which other people share their beliefs

and behaviors (Ross, Greene, & House, 1977). This would suggest that those who smoke would overestimate the overall prevalence of smoking, which would explain the reported associations between smoking and perceptions of others' smoking. However, if these results were in fact due to the false consensus effect, one would also expect to find a significant association between smoking and perceptions of the prevalence of smoking among permanent party personnel. The lack of such an association argues against a general false consensus effect explanation for these findings.

In summary, our study suggests that the likelihood of smoking initiation among newly enlisted military personnel who have recently undergone a period of forced abstinence is increased by (a) military role models who use tobacco, (b) by peer smoking behavior, and (c) by perceived smoking norms. Smoking cessation and prevention often ignores this young adult group (18 to 25 years old) and targets younger children or adult smokers (Backinger, Fagan, Matthews, & Grana, 2003; Lantz, 2003). Given the findings in this study, it is likely that the influence of peers and role models will need to be factored into successful prevention or early cessation efforts. Future research will need to explore the strength of peer and role model relationships in other settings and populations, such as high school, vocational, or college students. Further, these relationships should be explored prospectively to determine the strength of these factors as predictors of future smoking behavior.

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Table 1Participant Characteristics (N = 2,962)

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	Raw Mean (sd) 21.21 (2.60) 68.50 (74.50)		Multiple Imputation Mean (sd) 21.24 (2.57) 71.41 (73.23)
Variable			
Age (years, continuous) Length of time in technical training (days)			
	п	Percent	Percent
Gender			
Male	2,108	71.17%	75.70%
Female	666	22.48%	24.30%
Race/ethnicity			
Non-Hispanic white	2,192	74.00%	77.80%
Others	616	20.80%	22.20%
Education level			
High school, GED, vocational	1403	47.37%	52.67%
Some college, college degree	1311	44.26%	47.33%
Family history of smoking			
None	1,182	39.91%	44.00%
1 or more persons in house smoked	1,780	60.09%	56.00%
Pre-military alcohol use			
Nondrinkers	1,238	41.80%	44.90%
Drinkers	1,354	45.71%	55.10%
Symptoms of depression			
No	1,461	49.32%	82.40%
Yes	221	7.46%	17.60%
Perceived peer (classmates) norms		10.04.00	
\leq 50% have not smoked	1274	43.01%	70.13%
> 50% had smoked	540	18.23%	29.87%
Roommate influence ¹			
No	1248	48.85%	79.53%
Yes	267	9.01%	20.47%
Role model influence ²			
No	2092	70.63%	*
Yes	870	29.37%	*
Perceived permanent party norms			
\leq 50% do not smoke regularly (reference)	1222	41.26%	66.68
> 50% do smoke regularly	573	19.35%	33.32
Current smoking status			
Nonsmoker	2,071	69.92%	*
Smoker	694	23.34%	*

GED, general equivalency degree; sd, standard deviation.

¹Respondents indicated that their roommate smokes.

 2 Respondents indicated that some of their military training leaders and/or classroom instructors use tobacco products.

Table 2

Odds Ratios of Current Smoking by Smoking Status Before Basic Training

Variable	Previous Nonsmokers Nonsmoker vs. Initiator	Previous Smokers Re-Initiator vs. Quitter Adjusted OR (95% CI)	
	Adjusted OR (95% CI)		
Age (years, continuous)	0.98 (0.90–1.05)	0.94 (0.86–1.01)	
Gender			
Male (reference)	1.00	1.00	
Female	1.03 (0.70–1.52)	1.02 (0.70–1.49)	
Race/ethnicity	1.00	1.00	
Others (reference)	1.00 1.57 [*] (1.00–2.44)	1.00	
Non-Hispanic whites	1.57 (1.00–2.44)	0.95 (0.62–1.45)	
Education level	1.00	1.00	
High School, GED, vocational (reference)	1.00 0.48 (0.86-5.12)	1.00 0.88 (0.41-1.90)	
Some college, college degree Length of time in technical training	0.48 (0.86-5.12)	0.88 (0.41–1.90)	
Under the enforced ban (reference)	1.00	1.00	
Not under the enforced ban	1.00 3.27 [*] (2.16–4.93)	1.00 6.22 [*] (4.37–8.85)	
Family history of smoking	5.27 (2.10-4.95)	0.22 (4.37 - 6.63)	
No (reference)	1.00	1.00	
Yes	1.28 (0.92–1.79)	1.18 (0.85–1.64)	
Pre-military alcohol use	1120 (01)2 11/3)		
No (reference)	1.00	1.00	
Yes	1.00 1.89 [*] (1.35–2.65)	1.00 2.48 [*] (1.74–3.54)	
Symptoms of depression	100 (100 200)	2.10 (1.7.1 0.0.1)	
No (reference)	1.00	1.00	
Yes	1.31 (0.92-2.28)	1.78 (1.14–2.76)	
Religious influence			
No (reference)	1.00	1.00	
Yes	1.04 (0.73–1.48)	1.13 (0.82–1.57)	
Perceived peer (classmates) norms		1.00	
\leq 50% have not smoked (reference)	* 1.00	* 1.00	
> 50% had smoked	1.67*(1.05–2.67)	1.63 (1.03–2.58)	
Roommate influence ¹			
No (reference)	1.00 1.67 [*] (1.09–2.56)	1.00	
Yes	1.67 (1.09–2.56)	1.51 (0.84–2.71)	
Role model influence ²			
No (reference)	* 1.00	* 1.00	
Yes	1.69*(1.12–2.56)	1.95*(1.29–2.94)	
Perceived permanent party norms	1.00	1.00	
\leq 50% do not smoke regularly (reference)	1.00	1.00	
> 50% do smoke regularly	1.10 (0.72–1.69)	1.05 (0.67–1.64)	

* p < .05.

Note: Odds ratios have been adjusted for all variables included in this table.

CI, confidence interval; GED, general equivalency degree; OR, odds ratio.

¹Respondents indicated that their roommate smokes.

 2 Respondents indicated that some of their military training leaders and/or classroom instructors use tobacco products.