ABSTRACT Tobacco use by soldiers has been prevalent throughout the 20th century. Tobacco has been seen as a "right." Additionally, tobacco was viewed as a boost to a soldier's morale and to provide comfort, while reducing stress in austere conditions. Today, tobacco is known to increase healthcare costs, adversely affect readiness, and impact the military members' physical performance. The purpose of this ethnographic study was to describe patterns, practices, and experiences of active duty Army soldiers who use tobacco, have quit using tobacco, and have relapsed after a period of tobacco abstinence. Five themes were uncovered: 1.) Experiences associated with use of tobacco, 2.) Tobacco use in the Army, 3.) Experiences of starting and restarting tobacco, 4.) Balancing health risks with tobacco use, and 5.) Tobacco use regulations and policies. Findings are consistent with the conclusion that the Army culture supports soldiers' tobacco use.

Tobacco use by the general population in the United States has steadily declined; yet, tobacco use in the military has not declined and may even be increasing in some specific age groups. In a literature review of military tobacco use, Nelson and Pederson summarized the prevalence of tobacco use in recruits and members; they also reported on recent studies that document nonusers of tobacco who become users after accession. A recent study found that 25.1% of male and 14.1% of female recruits, ages 18 to 25, reported starting smoking after entering the Army to (a) relax or calm down (30.8%), (b) relieve stress (29.5%), and (c) relieve boredom (23.5%), (d) curb appetite, (e) fit in with friends, (f) be like family who smoked, (g) control weight, (h) be "cool," and (i) fit into the unit.

Military members cited the following reasons for tobacco use: (a) it is effective in combating stress, (b) it is available, (c) it is part of military culture, and (d) because the tobacco industry actively markets to the military. When entering the military, recruits experience forced abstinence from tobacco use during basic military training (BMT); however, past tobacco users typically return to their tobacco-use patterns within 1 month of BMT completion. Furthermore, smokeless tobacco (ST) use may be increasing in the military since it can be used when smoking is not permitted. Researchers have reported that ST users are more likely than nonusers to become smokers. Culture is defined as a common set of norms that help groups organize themselves, and it provides individuals with a sense of continuity and community. Additionally, some researchers have suggested that culture shapes tobacco use.

Usual demographic variables (i.e., age, gender, ethnicity) fall short of presenting an accurate accounting of tobacco-use patterns. Thus, to fully understand tobacco use and cultural patterns that influence tobacco use, an ethnographic approach was used to examine the influence of the Army culture on tobacco use. Specifically, the current research study aim was focused on describing patterns, practices, and experiences of active duty Army soldiers who use tobacco, quit using tobacco, and relapsed after a period of tobacco abstinence. In this study, the Army was considered the culture.

Ethnography is a qualitative method that uses participant observation as a central strategy to help initiate and augment information collected through formal and informal interviews. Ethnography in this study was used to understand tobacco-use patterns in the Army culture and to observed and "learn from people" as they were actively involved in social events in a natural setting. Although themes are not intended to be generalized, they offer a generalizable perspective of what is happening in the culture for future hypotheses testing.

METHOD

Setting

The study setting was an Army post in the western U.S. with a population of almost 14,000 soldiers during the study, of which 90% were male. During the course of the study approximately one-third of the population was deployed. The population of soldiers consisted of 88% who were enlisted, 10% officers, and 2% warrant officers. Three Institutional Review Board (IRB) approvals were received before the study implementation. All participants completed study consents, Health Insurance Portability and Accountability Act (HIPAA) waivers, and demographic information sheets after being informed about the study.

Sample

Interviews were conducted between 2004 and 2006 and guided by semistructured open-ended questions. Additionally,
**Tobacco Use in the Army: Illuminating Patterns, Practices, and Options for Treatment**

**University of Colorado at Colorado Springs, Beth-El College of Nursing and Health Sciences, 1420 Austin Bluffs Parkway, P.O. Box 7150, Colorado Springs, CO, 80930-7150**

**Approved for public release; distribution unlimited**

### Subject Terms
- Tobacco Use in the Army
- Patterns
- Practices
- Options for Treatment
Data Management and Analyses

Audiotaped interviews were transcribed by a professional transcriptionist and one researcher audited the transcripts for accuracy. Consistent with ethnographic methods, hundreds of informal interviews and observations took place during data collection. Observations and information collected in the informal interviews were recorded in the researchers' field notes. Data saturation occurred after 72 formal interviews. Audiotaped interviews were carried out by three interviewers, and the interviews ranged from 10 to 40 minutes in length. Table I summarizes the sample characteristics.

<table>
<thead>
<tr>
<th>TABLE I. Sample Demographics</th>
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<tbody>
<tr>
<td>Sample Size</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Marital status</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Rank of enlisted and officers</td>
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<td></td>
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<tr>
<td>Currently abstaining from tobacco</td>
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<tr>
<td>Ethnicity</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Length of time smoked</td>
</tr>
<tr>
<td>Times tried to quit</td>
</tr>
<tr>
<td>Longest time abstained</td>
</tr>
</tbody>
</table>

*Enlisted ranks from Private to Command Sergeant Major. *Officer ranks from 2nd Lieutenant to Major.

RESULTS

Five themes were uncovered during the analysis and each theme will be briefly summarized below. Exemplars for each theme are in Tables II through Table VI. A detailed description and discussion of each theme can be obtained from the first author upon request.

Experiences Associated with the Use of Tobacco (See Table II)

Soldiers' reasons for using tobacco were varied. Some enjoyed the relaxation effect they experienced when using tobacco; but soldiers also used tobacco to combat stress, to stay awake, and to fight boredom. Soldiers' increased stress was identified as a reason for tobacco relapse and many soldiers who had been deployed talked about tobacco use in combat to sharpen their focus and temper fear.

Soldiers also mentioned enjoying the oral stimulation from tobacco use and noted that when they abstained they missed it. Some soldiers substitute items such as toothpicks and food to replace the oral stimulation they received.
from tobacco use. Others viewed their tobacco use as part of their daily routine, just like showering and shaving. Also, the experience of tobacco use was connected to being at home, particularly when the soldier was deployed. Tobacco was also part of social interactions and spending time with others. Soldiers spoke of using tobacco to meet others, to be accepted as a soldier, or because it was an expected behavior.

**Tobacco Use in the Army (See Table III)**

Soldiers described the Army as an environment with intense tobacco users; however, not many officers openly used tobacco. The officers in this study believed that using tobacco in front of their troops exhibited poor role modeling, a belief communicated to junior officers by senior officers. If an officer used tobacco, it was more discretely, or the officer used ST.

When the Army restricted smoking (i.e., office, meeting, field training, deployed), soldiers often used ST depending on the soldier’s preference and external restrictions/situations. For instance, if smoking posed a potential danger (i.e., fire, explosion) to a gasoline truck driver, ST was often used. Although soldiers believed that the Army did not create tobacco users, they believed the Army played a role in handing down tobacco-use traditions, and it created an environment that was tobacco friendly. If soldiers wanted to quit tobacco, many did not believe the Army environment was conducive to abstinence. Smoke breaks were viewed as a legitimate break; however, some soldiers who did not use tobacco felt their need for a break was not always recognized because of their lack of “physical need” for tobacco.

**Experiences of Starting and Restarting Tobacco (See Table IV)**

Soldiers’ initial experiences with tobacco were similar regardless of the type of tobacco chosen. Many soldiers recalled their first tobacco experiences with friends, before or after entering the Army. Regardless of the type of tobacco (e.g., ST, smoking), most soldiers did not find their first tobacco experience pleasant and reported they experienced light headedness, dizziness, disorientation, dry heaves, nausea, and vomiting; however, these experiences did not deter soldiers from continuing tobacco use. Soldiers also remembered their forced tobacco cessation period during BMT; however, they did not believe that going without tobacco was a problem since they were so “busy.” A number of soldiers recalled restarting tobacco post BMT. Although some soldiers reported planned relapses of tobacco use, others described relapses that were spontaneous. Some soldiers just “picked up a cigarette” when one was available and returned to tobacco use.

**Balancing Health Risks with Tobacco Use (See Table V)**

Soldiers were aware of the health risks associated with tobacco yet most smokers reported that they had no intention of quitting. Younger soldiers’ rationale for their continued use was related
them and there was a lot of use among other soldiers, which
cessation, many indicated that tobacco was very available to
leave the Army if they wanted to be successful in tobacco
one needed to be motivated to quit or "leave the Army." When
relapse when placed in wartime conditions; however, most
soldiers in this study who smoked or used tobacco did not
tried to quit did so by weaning themselves, or going "cold
training.

TABLE IV. Theme: Experiences of Starting and Restarting
Tobacco

<table>
<thead>
<tr>
<th>Starting experiences</th>
<th>Experiences of restarting</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Just feeling sick.&quot;</td>
<td>&quot;I went to Iraq, [and on the] [second] day started smoking again due to stress.&quot;</td>
</tr>
<tr>
<td>&quot;I started using tobacco because everybody else was doing it.&quot;</td>
<td>&quot;One night I had a couple of beers, [and] started smoking again.&quot;</td>
</tr>
<tr>
<td>&quot;I witnessed a recruit ... smell tobacco on the drill instructor. I could see the joy</td>
<td></td>
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</tbody>
</table>
  on the Private's face when he smelled it ... they want you to come by [them] because |
  they want to smell the smoke on you."                                               |
| "[Looking forward to that freedom to buy it [cigarettes] again."                     | "I had my heart set on it ... seeing all those other guys getting to [use tobacco] ...    |
| "I felt horrible [from smoking] ... I mean my body was having trouble functioning |
  while I was smoking in my house, I'd be killing all my kids and my wife."            |

TABLE V. Theme: Balancing Health Risks with Tobacco Use

<table>
<thead>
<tr>
<th>Future health risks</th>
<th>Present health risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;No soldier here in America ... nobody can ever tell you they don't know, everybody</td>
<td></td>
</tr>
</tbody>
</table>
  knows, we are very much aware of what cancer can do to you."                        |
| "I just figure being so young and active and health, maybe it's a risk I can afford |
  to take at this point ... it's fun and pleasurable for me [and] it's not really hurting |
  me or holding me back right now."                                                   |
| "I just always figured by the time I get old enough or I smoke long enough ...    |
  maybe they will have made some medical advances [to cure the disease]."             |
| "They [dentists] tell you, you'd better quit ... they said it's not good for you    |
  and they show you pictures [of what tobacco can do to you]."                        |
| "I felt horrible [from smoking] ... I mean your lungs feel horrible. It's awful cough |
  up stuff."                                                                         |
| Soldiers experienced sore gums, gum disease, and heartburn swallowing tobacco juice. |
| Health risks to others                                                               | Balancing health risks with quitting                                                   |
| "I don't think really ... dipping and chewing is (sic) the problem. I think cigarettes  |
  is (sic) more of a problem ... because when I dip, I'm only killing myself ... if I   |
  was smoking in my house, I'd be killing all my kids and my wife."                    |
| "I just figure being so young and active and health, maybe it's a risk I can afford |
  to take at this point ... it's fun and pleasurable for me [and] it's not really hurting |
  me or holding me back right now."                                                   |
| "I don't think there is really anything out there that can probably stop it. It's got- |
  ten to the point where I don't even want to stop. I know what kind of monster       |
  awaits (sic)."                                                                     |
| "The first time I did try to quit and I was doing physical training (PT), I noticed |
  that PT was a lot harder without nicotine. My body was used to having nicotine and     |
  then it didn't have it, it [my body] was having trouble functioning without it ...    |
  so I realized that was a physical addiction as well as a mental dependency."        |
| "I'll just smoke a cigarette then. And once you have that first one, it is not turning  |
  back."                                                                            |

*Observations recorded in field notes.

made it difficult to abstain when so many others were using it around them.

Tobacco-Use Regulations and Policies
(see Table VI)

Tobacco restrictions were multilevel, extending from individual/unit restrictions to state/federal laws, policies, and regulations. Soldiers predominately knew the tobacco restrictions and modified their behaviors accordingly. Soldiers used
**TABLE VI.** Theme: Tobacco-Use, Regulations and Policies

| Controlling use through regulations | “If you need to [use tobacco] that bad you needed to excuse yourself, and there’s typically areas set up to satisfy that urge and not be in the sight of the [BMT] trainees but some drill instructors [did] break that policy [and use ST during interactions with recruits].”
| | “I would say it’s kind of overlooked because they’re trying to give these guys as much freedom as they can with those [living in the] barracks ... everybody knows that people smoke in the barracks.”
| | “[If commanders] designated smoking spots so far away ... because it’s about a million miles to walk to it, [it discourages smoking].”
| | “You don’t have to leave the building to take a smoke break.”
| The lack of a ST policy | The Army does not impose the same restrictions on smokeless tobacco (ST) as it does on smoking tobacco.
| Policies change depending on “who’s in charge” | “There’s definitely a lack of uniformity [in ST use indoors].”
| | “Some commands will be like ‘hey, smoke wherever you want to smoke’ [and] some commands will be like ‘you can’t smoke but two hundred meters from this door ... there is definitely a lack of uniformity.”
| Tobacco is costly | “[The habit of tobacco use is] ‘expensive.’”
| Tobacco use is a choice | “I think the Army is increasing its values, trying to implement certain values ... have a clean cut Army.”
| | “If you choose to smoke or use tobacco then that’s your choice.”
| | “You know they are staying out late, they’re drinking even though they are underage. And then drinking turns to social smoking because my friends are doing it. So I think the Army kind of accidentally promotes smoking. Then you put a young person into a stressful situation. All they know from their past and watching movies and things are when people are under that amount of stress, when it’s over they have a cigarette.”
| Discrimination and smoking | “[Tobacco reduction or abstinence is] not going to happen voluntarily because it has become ingrained in the way these people operate. The military, it’s funny because the people as they come in they learn from these guys who have been in twenty years and so all these bad habits and good habits ... the gear might change but the same attitudes get passed on.”
| | “Yeah, it is such a pain when you are in a bar or something in the middle of a Monday Night Football game with three seconds left and you want to smoke a cigarette and you gotta wait.”

*Observations recorded in field notes.

ST indoors because it was not restricted and they could get their work done while using tobacco. Also, the use of ST indoors was allowed by group consensus in meetings. If the supervisor/commander who was conducting the meeting openly used ST, the subordinates were allowed to use ST in the meeting as well. During the study period, the Army did not regulate ST indoors, except in healthcare settings.

Soldiers noted the regulations were modified depending on whether the supervisor/commander used tobacco. If the supervisor/commander used tobacco, the regulations were relaxed, or perceived as less stringent whereas, if the supervisor/commander did not use tobacco, the tobacco restriction governed by regulation was enforced.

Tobacco was recognized as a costly habit and some soldiers had considered quitting because of the cost; however, no soldier had abstained from tobacco on the basis of cost alone. Soldiers felt that tobacco use was their right and they alone should be the one to determine if they use it or not. Interestingly, some soldiers felt that state/federal regulations discriminated against them when tobacco use was restricted.

**DISCUSSION**

The findings from this study are consistent with those of others. Recruits come to the military and begin tobacco use because their friends use tobacco. We found that soldiers used tobacco to make friends, combat stress, stay awake, and socialize with each other. Furthermore, soldiers taught other soldiers how and when to use tobacco. Although it is not clear if the Army culture influenced soldiers’ tobacco use, seasoned soldiers were identified as conveying information about tobacco use as part of being a soldier.

Soldiers in this study used tobacco to relax, satisfy oral needs, socialize, and for comfort. Also, they believed tobacco use helped them moderate psychological, social, and physical
stresses, which were related to deployments, training requirements, loneliness, sleep deprivation, and the soldier’s life situation. These findings are similar to those reported among Navy personnel during Desert Storm.10

The Army has recognized the impact that tobacco use has on the short- and long-term health of soldiers, their mental health, fitness levels, safety and overall healthcare costs, ultimately impacting the readiness of the troops.7,24 Implementation of smoking restrictions and development of cessation programs by the Army reflects an awareness of the ill effects caused by tobacco use.25 Soldiers knew the risks of using tobacco in this study14 and yet they continued using tobacco because they felt their youthfulness would protect them from health problems. Also, they believed using tobacco was a minor risk compared to the risks they were exposed to in combat.

Although prevalence of ST use in the military has been examined in the literature,14,16,26-29 no past research has documented the use of ST as a means for circumventing smoking restrictions. The prevalence of ST use indoors was an unexpected study finding.

Recent literature has suggested that the ST industry has tried to market its products as less harmful alternatives to smoking.26,31 Soldiers viewed ST as safer than smoking tobacco; however, soldiers were aware of the relationship of ST and oral health. Also, ST was not viewed as impacting physical fitness, lung capacity, and overall health. ST could easily be used at work, fitting in with job classification restrictions. Findings in the current study were consistent with the literature on prevalence of ST use in the military.24,25

Dentists were reportedly assertive in educating soldiers about tobacco cessation, whereas, healthcare providers (HCPs) routinely asked soldiers if they wanted to stop using tobacco during primary care visits but if the soldier had no interest in cessation, no further discussion related to tobacco cessation followed. ST users specifically mentioned receiving education about tobacco; however, soldiers were aware of the relationship of ST and oral health. Also, ST was not viewed as impacting physical fitness, lung capacity, and overall health. ST could easily be used at work, fitting in with job classification restrictions. Findings in the current study were consistent with the literature on prevalence of ST use in the military.24,25

Programs for Use during and Immediately after BMT. Restrictions on smoking tobacco indoors; however, ST is not considered. Army regulations should address “tobacco” and not just restrictions on smoking after BMT should be a priority for the Army since many soldiers between 18 and 24 years old are becoming the new generation of tobacco users. Reducing tobacco use in this age group and others will improve the overall health of the Army and impact mission readiness. The following recommendations are based on data collected during the study:

1. Limit Tobacco Use in Uniform. Soldiers believed that tobacco use was perceived as unprofessional, and if the Army wants to be viewed as a professional organization, it should not allow soldiers to use tobacco in uniform. If the Army does continue to allow soldiers to use tobacco, it should seriously consider limiting soldiers’ tobacco use while in uniform, and develop guidelines to fit the new image it wants to portray to the public.

2. Restrict Tobacco Use on Military Posts. Tobacco use could be restricted on military installations. Models for such actions can be found in changes in state laws that have resulted in reductions in tobacco use. For example, California implemented a massive antitobacco campaign and subsequent legislative changes prohibiting tobacco use in restaurants and bars. As a result the state saw an increase in the use of tobacco cessation programs including counseling, nicotine replacement, patients’ healthcare involvement, self-help groups, and smoking cessation classes.38 Furthermore, restricting smoking in public places in California has helped change individuals’ tobacco-use patterns.38 If the Army restricts tobacco on its posts, it may provide a clear message that the culture of tobacco use in the Army is changing.

3. Address All Forms of Tobacco Use in Army Regulations. Army regulations should address “tobacco” and not just focus on “smoking.” Currently, Army regulations restrict smoking tobacco indoors; however, ST is not considered. A few soldiers in the current study reported that some units had local policies restricting ST use indoors.

4. Prohibit Tobacco Sales in Post Exchanges. The Army should not allow tobacco products to be sold on post because it was relevant only for those who used tobacco. Continuing to sell tobacco on post implies that the Army condones tobacco use, contradicting health messages and undermining the Army’s “healthy image” portrayed in the recruiting advertisements.

5. Develop and Evaluate Cessation and Prevention Programs for Use during and Immediately after BMT. Since BMT is a period when smoking is not allowed, reinforcement of nonsmoking during this period and support for continued nonsmoking after it could provide the basis for reducing tobacco use overall.

6. Design and Evaluate Military-Specific Tobacco Interventions. New tobacco cessation interventions that are culturally sensitive to the Army need to be designed, implemented, and evaluated. Research using inductive means
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should be used to develop the military-specific intervention, taking into account the cultural influence of tobacco initiation, cessation, and relapse. Interventions should not include cessation techniques only for current users but also for those who are nonusers. Nonusers should be encouraged to maintain abstinence by HCPs. Also, cessation interventions could include education related to coping with stress. Since it is impossible to eliminate external stressors faced by the soldiers, the Army should help soldiers develop alternative coping mechanisms to deal with personal stressors (e.g., boredom, fear, loneliness).

7. Communication by Supervisors of Tobacco Cessation Messages. Health messages related to tobacco use should be consistently communicated from commanders and supervisors. All ranks need to be encouraged to stop tobacco use, and commanders/supervisors are the first who can influence the tobacco cultural change.39 Furthermore, if senior leaders use tobacco they should be targeted for tobacco cessation by healthcare providers. Frontline supervisors also need to consistently educate and stress the importance of tobacco cessation as a deployment health and readiness issue (e.g., upper respiratory infections, BMT attrition). Tobacco education should be incorporated into monthly briefings similar to seatbelt safety, and drinking and driving education.

8. Reward for Not Using Tobacco. Soldiers recommended the military monitor tobacco nonuse patterns just as it monitors individuals for drug use. Some suggested that the Army should financially reimburse, or reward the soldiers who are saving the Army's healthcare costs by not using tobacco. This approach has been used in the civilian sector, differentiating healthcare costs and life insurance rates for nontobacco users.

9. Easy Access to Tobacco Intervention Programs. The Army should consider exploring ways to make tobacco cessation programs easily accessible. Although the Army has tobacco cessation programs on posts worldwide that offer an array of tobacco cessation interventions (i.e., support, nicotine replacement therapy, education), these programs are not always accessible with the high operational tempo (e.g., deployments, war, training). The Army should make every effort to make tobacco cessation programs accessible by developing online education and support groups. Furthermore, a toll-free access telephone number for tobacco cessation information and support could be established. Finally, the Army should target soldiers returning from deployments who are tobacco users with culturally relevant tobacco cessation interventions. Rigorous evaluations of any of these new programs need to be conducted before they are implemented on a wide scale.

LIMITATIONS

Study findings are only intended to provide insight and understanding of how the Army culture influences soldiers' tobacco initiation, use, and abstention as members of the Army. The findings are not necessarily representative of all branches of the military or all members of specific bases or services. The study findings provide direction for future research in tobacco education, cessation, and policy development.

CONCLUSIONS AND IMPLICATIONS

Tobacco use is prevalent in the Army and the Army culture supports its use. Because of the Army mission and the high stress, seasoned soldiers help recruits/younger soldiers tolerate the high stress levels when past coping mechanisms are not helpful. Tobacco is readily accessible to soldiers on military installations and in most deployed settings. This is consistent with Smith and her colleagues' findings, the military continues to offer cheap tobacco products in the military sales system. Furthermore, tobacco use continues to be viewed as a "right" by soldiers, and the U.S. military makes tobacco available to its members at a price below tobacco sold in the civilian sector. Although military leaders may believe tobacco helps soldiers cope with stress and living in austere conditions, the shortsightedness of allowing tobacco use impacts soldiers' health, military readiness, and healthcare costs. Soldiers circumvent smoking restrictions in the Army regulations by using ST. The Army needs to include all forms of tobacco in any regulation that addresses tobacco use.

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