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Authors

Vijayaraghavan, Maya
Hurst, Samantha
Pierce, John P

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A Qualitative Examination of Smoke-Free Policies and Electronic Cigarettes Among Sheltered Homeless Adults

Maya Vijayaraghavan, MD, MAS; Samantha Hurst, PhD; John P. Pierce, PhD

Abstract

Purpose. To examine attitudes toward smoke-free policies and perceptions of e-cigarette use among homeless adults.

Approach. A cross-sectional qualitative study was conducted.

Setting. Study setting comprised seven transitional homeless shelters with indoor smoke-free policies in San Diego County; facilities differed in outdoor restrictions on smoking.

Participants. Sixty-six current or former smokers were the study participants.

Method. Participants completed a questionnaire on smoking behaviors, perceived antitobacco norms, and attitudes toward smoke-free policies, and attended a focus group interview that explored these topics. We used a directed content analysis approach to analyze the focus group transcripts.

Results. Clients in facilities with outdoor restrictions on smoking had stronger perceived antitobacco norms than those in facilities without such restrictions. We identified the following major themes: attitudes toward smoke-free policies, the use of e-cigarettes, the addictive potential of cigarettes, vulnerability to tobacco industry marketing, and interest in smoking cessation. The consensus was that smoke-free policies were important because they limited secondhand smoke exposure to nonsmokers and children. All were curious about e-cigarettes, particularly if they could be smoked in areas where smoking was prohibited and/or used as a cessation aid.

Conclusion. In this study of homeless adults, there was strong support for indoor and outdoor smoke-free policies. However, misperceptions that e-cigarettes could be used indoors could threaten antitobacco norms, highlighting opportunities to educate about the potential risks of e-cigarette use among homeless individuals. (*Am J Health Promot* 0000;00[0]:000–000.)

Key Words: Cigarette Smoking, Electronic Cigarettes, Homeless Adults, Smoke-Free Policies, Smoking Cessation, Prevention Research. Manuscript format: research; Research purpose: descriptive; Study design: qualitative; Outcome measure: behavioral; Setting: community; Health focus: smoking control; Strategy: policy; Target population age: adults; Target population circumstances: education/income level and geographic location

PURPOSE

The homeless population has one of the highest rates of cigarette smoking, with prevalence exceeding that of the general population by 5-fold.¹ Concurrent use of cigarettes and other tobacco products is common among homeless individuals, and it may be associated with increased nicotine dependence and reduced smoking cessation attempts.²

During the past 2 decades, smoke-free laws have denormalized tobacco use and have led to significant declines in cigarette smoking prevalence in the general population.³ In recent years, homeless service settings have started to implement smoke-free policies. A study based in Los Angeles County found that most participating transitional or long-term homeless shelters had indoor smoking restrictions.⁴ Another study in Dallas, Texas, found that most of the clientele of a homeless shelter were supportive of an indoor and a partial outdoor ban on smoking.⁵ In a recent study in San Diego County, sheltered homeless adults supported a smoke-free policy that prohibited smoking indoors and outdoors within five blocks of the building, and they expressed interest in smoking cessation related to the policy.⁶

These studies highlight the potential of smoke-free policies to denormalize tobacco use in a population where rates of smoking are staggering and permissive attitudes toward smoking abound.^{6–9} However, one potential threat to the denormalization of tobacco use is the widespread availability of and experimentation with e-cigarettes.¹⁰ In the general population, the most common reasons for the use of e-

Maya Vijayaraghavan, MD, MAS, and John P. Pierce, PhD, are with the Cancer Prevention and Control Division, Moores UCSD Cancer Center, University of California, San Diego. Maya Vijayaraghavan, MD, MAS; Samantha Hurst, PhD; and John P. Pierce, PhD, are with the Division of Health Policy, Department of Family Medicine and Public Health, University of California, San Diego.

Send reprint requests to Maya Vijayaraghavan, MD, MAS, Cancer Prevention and Control Division, Moores UCSD Cancer Center, 3855 Health Sciences Drive, MC 0901, La Jolla, CA 92093-0901; mvijayaraghavan@ucsd.edu.

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cigarettes are the perception that e-cigarettes are safe to use indoors and the belief that they can be used as smoking cessation aids.¹¹ However, studies have demonstrated that e-cigarettes can be a source of indoor air pollution, and their use as smoking cessation aids is equivocal.¹² Little is known about perceptions of e-cigarettes among populations with high rates of cigarette smoking, such as the homeless population.

We undertook a qualitative study to examine attitudes toward smoke-free policies and perceptions of e-cigarettes and their association with cigarette smoking behaviors among sheltered homeless adults. We focused on homeless shelters that differed in outdoor restrictions on smoking. At the time of the study, California's indoor and outdoor clean air laws did not address the use of e-cigarettes indoors.

APPROACH

This was a cross-sectional qualitative study. We administered a cross-sectional questionnaire to and conducted focus group interviews with homeless adults who were recruited from seven transitional shelters that differed in outdoor restrictions on smoking.

SETTING

We conducted 10 focus group interviews with a total of 66 current or former smokers from 7 transitional or long-term shelters in San Diego County between July 2013 and April 2014. Transitional shelters offer supportive services and long-term housing for up to 24 months, with the goal of helping homeless individuals and families transition into permanent housing. To recruit eligible facilities, we obtained an inventory of transitional shelters in San Diego County from the San Diego County Housing and Community Development. We made three in-person recruitment announcements between October 2013 and February 2014 during monthly Regional Continuum of Care Council meetings. The Regional Continuum of Care Council is the largest network of homeless service providers in San Diego County, including staff of transitional shelters, who meet monthly

Table 1
Smoke-Free Policies and Smoking Status of Participants in Transitional Shelters in San Diego (N = 66)

Smoke-Free Policies	Facility	No. of Participants	Smoking Status of Participants
Time-controlled access to the outdoor designated smoking zone	Facility 1	Focus group no. 1: 2	Current smokers
		Focus group no. 2: 7	Current smokers
	Facility 2	Focus group no. 1: 8	Current smokers
Unlimited access to the outdoor designated smoking zone	Facility 3	Focus group no. 1: 4	Current smokers
		Focus group no. 2: 9	Current and former smokers
	Facility 4	Pilot interviews: 3*	Current smokers
No outdoor smoking restrictions		Focus group no. 2: 9	Current smokers
	Facility 5	Focus group no. 1: 9	Current smokers
	Facility 6	Focus group no. 1: 8	Current smokers
	Facility 7	Pilot interview: 1*	Former smoker
		Focus group no. 1: 6	Current smokers

* Pilot-tested focus group questions with three current smokers and one former smoker.

to discuss the provision of services to homeless individuals and families. Of the 61 eligible transitional shelters in San Diego County, we recruited seven facilities. All facilities restricted smoking indoors; two facilities did not restrict smoking outdoors ("no outdoor ban"), three restricted smoking to outdoor designated smoking areas but allowed unlimited access to these areas ("partial outdoor ban"), and two had time-controlled access (i.e., four to five smoking breaks per day) to the outdoor designated smoking area ("time-controlled partial outdoor ban"; Table 1).

PARTICIPANTS

Eligible participants were current or former smokers who were living in the participating facilities, 18 years or older, and able to provide informed consent. Participants were representative of the sheltered homeless population in San Diego County in age, gender, and race/ethnicity distributions.¹³

METHODS

Data Collection

We recruited participants 1 to 2 weeks prior to the day of the focus group by making announcements about our study during group meetings at the facility. We overrecruited for each group in the event that some of those who were recruited might not

return for the scheduled focus group. In facilities where we had more than 10 interested participants, we conducted an additional focus group interview to ensure that groups were not overcrowded. We stopped recruiting participants for the study once we reached thematic saturation.

Focus groups had an average of 7 participants in each group (range, 2–11 participants) and lasted for 45 minutes. All focus groups except one comprised current smokers. In the facility where we conducted a focus group interview with both current and former smokers, the moderator (the principal investigator) posed questions from the interview protocol separately to current and former smokers. We conducted the focus groups at the shelters and during a time when participants had no competing priorities. We compensated participants \$10, in the form of gift cards to a local grocery store or a daily bus or trolley pass, for their time. The University of California, San Diego Institutional Review Board approved all study procedures.

Focus group discussion guides were developed by the principal investigator and a multidisciplinary team of researchers familiar with tobacco use in the homeless population (Table 2). Questions were pilot tested with representatives of the target population (three current smokers from facility no. 4 and one former smoker from

Table 2
Focus Group Interview Protocol

Current smokers

1. Tell us how long you have been smoking?
2. What are some of your triggers to smoking?
3. Think back to triggers related to smoking, tell us your views on whether the smoking policies in your facility influence your decision to smoke?
4. How do you feel about living in smoke-free housing?
5. What would you do if the facility you were staying at completely banned smoking?
6. When you leave this facility, do you think you will be ready to make the transition to living in smoke-free housing or working in smoke-free workplaces?
7. If you were thinking about stopping smoking, what are some of the strategies that will help you quit?
8. What do you think of electronic cigarettes?
9. If you had a chance to give advice to the director of this program on a smoking cessation program, what advice would you give?

Former smokers

1. How long ago did you stop smoking?
2. How did you stop smoking?
3. Thinking back to some of the reasons for why you stopped smoking, tell us your views on living in smoke-free housing?
4. How do you feel about living in smoke-free housing?
5. How do you feel when other clients smoke around you?
6. What are your concerns about living in housing where smoking is permitted?
7. Do you foresee a role for yourself in helping other clients in your facility from stopping smoking?
8. If you had a chance to give advice to the director of this program on a smoking cessation program, what advice would you give?

facility no. 7) and included in the analysis. All interviews were digitally recorded and participants were asked to sign a supplementary form acknowledging their permission to record the interview and for the digital files to be transcribed verbatim into text files for final review and analysis.

Prior to the focus group, participants completed a questionnaire on smoking

behaviors, perceived antitobacco norms, and attitudes toward the facility's smoke-free policies. Current smokers reported the number of cigarettes smoked on smoking days and the time that it took to smoke their first cigarette after waking (after 60 minutes, 31–60 minutes, 6–30 minutes, and within 5 minutes). Current smokers reported whether they had made a quit attempt in the past year, used nicotine replacement therapy or medications (e.g., bupropion or varenicline) in a prior quit attempt, or were interested in using an e-cigarette to quit cigarette smoking. To explore attitudes toward smoke-free policies among current smokers, we introduced the following statement, "Because of the restrictions on where I can smoke..." and provided the following response statements: "I smoke less than what I used to," "I tried to stop smoking for a short time," "I am getting ready to quit completely," and "I am not happy to stay in the facility." Participants responded to each of the statements using a 5-point Likert scale (strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree).⁶

Participants self-reported their age, sex, race/ethnicity (white, African-American, Latino, Asian/mixed/other), education (less than high school, high school or general education development, some college, college or professional training), and length of stay in the current facility. We determined history of chronic homelessness (i.e., having been continuously homeless in the past year or having four or more episodes of homelessness in the past 3 years)¹⁴ from self-reports of prior housing.

Analysis Strategies

The audiotaped focus group interviews were transcribed verbatim by a contracted professional transcription service, and transcribed texts were redacted of any personal identification data. We analyzed qualitative data using a directed content analysis approach,¹⁵ which uses preexisting theory or prior research to help focus research questions and to identify key concepts. In this study, we used previous research⁶ and a literature review to develop the interview protocol.^{4,5} The first author checked the transcripts for accuracy and then, through a collaborative process

with two other research team members, coded the transcripts. We resolved disagreements in assignment or description of codes through discussion and consensus among the research team, and we developed a final codebook. Through iterative processing of the transcripts, we further refined and reduced the number of overall codes by grouping them into a short list of inclusive categories and themes. Some codes were merged because of redundancy, and others were dropped because of a lack of utility for the overall goals of the analysis. Features of Microsoft Word and Microsoft Excel were used to organize the transcribed text and to facilitate efficient coding. We chose quotes that were illustrative of the themes we identified.

We reported sociodemographic and smoking characteristics using means (SD) for continuous variables and proportions for categorical variables. We dichotomized responses as "agree or strongly agree" vs. "disagree or strongly disagree or neither agree nor disagree." We examined bivariate associations using the χ^2 statistic for categorical variables and the analysis of variance for continuous variables. Data were analyzed using Stata statistical software (version 11; College Station, Texas).

RESULTS

Participant Demographics

Of the 66 ever-smokers, the mean age was 42.9 years (SD, 11.5 years), 43.9% were male, and 48.5% were white (Table 3). The average length of stay in the current facility was 6.4 months (SD, 7.0 years), and 45.5% met criteria for the federal definition of chronic homelessness. Participants living in the facility without outdoor smoking restrictions were younger (no outdoor ban, 32.5 $\pm$ 6.3 years; partial outdoor ban, 49.3 $\pm$ 8.9 years; time-controlled partial outdoor ban, 39.5 $\pm$ 11.4 years; $p < .03$) and had longer lengths of stay than those in facilities with outdoor restrictions (no outdoor ban, 10.1 $\pm$ 11.1 months; partial outdoor ban, 6.8 $\pm$ 5.3 months; time-controlled partial outdoor ban, 2.4 $\pm$ 1.9 months; $p < .03$). There were no other demographic differences by facility smoke-free policy (data not shown).

Table 3
Sample Characteristics, Smoking Behaviors, Perceived Antitobacco Norms, and Attitudes Toward Smoke-Free Policies Among Homeless Adults (N = 66)

Characteristics	Total
Age, y, mean (SD)	42.9 (11.5)
Male, No. (%)	29 (43.9)
Race/ethnicity, No. (%)	
White	32 (48.5)
African-American	14 (21.2)
Latino	10 (15.2)
Asian/other race	10 (15.2)
Education, No. (%)	
Less than high school	7 (10.6)
High school or general education development	20 (30.3)
Some college	24 (36.3)
College and/or professional training	15 (22.7)
Length of stay in current facility, mo, mean (SD)	6.4 (7.0)
Chronic homelessness, No. (%) [*]	30 (45.5)
Current smoker, No. (%)	62 (95.4)
Smoking behaviors among current smokers	
Average daily cigarette consumption, mean (SD)	8.9 (6.3)
Time to first cigarette in the morning <30 min, No. (%)	37 (59.7)
Intention to quit at baseline, No. (%)	
Never expect to quit	17 (27.4)
May quit in the next 6 mo	24 (38.7)
Will quit in the next 6 mo	11 (17.7)
Will quit in the next 1 mo	10 (16.1)
Previous quit attempt for at least 1 d in the past year, No. (%)	30 (48.4)
Used nicotine replacement therapy in a prior quit attempt, No. (%)	16 (25.8)
Used bupropion or varenicline in a prior quit attempt, No. (%)	9 (14.5)
Interested in using an electronic cigarette to quit cigarette smoking, No. (%)	32 (51.6)
Smoke-free policies provide a clean and safe living environment, No. (%) [†]	44 (70.9)
Staff smoked with me during smoking breaks, No. (%) [†]	21 (33.9)
Staff offered cigarettes to participants, No. (%) [†]	9 (14.5)
Reduced consumption because of the policy, No. (%) [†]	42 (67.7)
Tried to stop smoking for a short time because of the policy, No. (%) [†]	24 (38.7)
Interest in quitting smoking completely because of the policy, No. (%) [†]	26 (41.9)
Unhappy to stay in the facility because of the policy, No. (%) [†]	6 (9.7)

^{*} Housing and Urban Development definition: continuously homeless in the past year or having had four or more episodes of homelessness in the past 3 years.

[†] Proportion represents participants who either agree or strongly agree with the statement.

Smoking Behaviors, Perceived Antitobacco Norms, and Attitudes Toward Smoke-Free Policies

The sample included 62 current smokers and 4 former smokers (Table 3). Average daily cigarette consumption for current smokers was 8.9 cigarettes per day (SD, 6.3 cigarettes per day). Of the current smokers, 59.7% reported smoking within 30 minutes of waking. Approximately half (48.4%) reported making a quit attempt in the past year. One-fourth of the current smokers (25.8%) reported having used a nicotine aid in a prior quit attempt, and 14.5% reported having used medica-

tions in a prior quit attempt. Half of the current smokers (51.6%) reported interest in using an e-cigarette to quit cigarette smoking. Smoking behaviors did not differ by facility smoke-free policy (data not shown).

Most current smokers (70.9%) and all former smokers agreed that smoke-free policies were important because they provided a clean and safe living environment. A third of the participants (33.9%) reported that staff had smoked with them during smoking breaks. Of the current smokers, 67.7% agreed that the policies were associated with their reduced smoking, and less than half

reported that the policies were associated with making a quit attempt (38.7%) or interest in quitting smoking completely (41.9%). A minority (9.7%) reported that they were unhappy staying in the facility because of the policies. Participants living in facilities without an outdoor ban were more likely to report that they had smoked with staff compared with those in facilities with an outdoor ban ($p < .001$; data not shown).

Qualitative Themes

Five major themes emerged from the focus group discussions: attitudes toward smoke-free policies, the use of e-cigarettes, the addictive potential of cigarettes, vulnerability to tobacco industry marketing, and interest in smoking cessation (see Table 4 for selected quotes).

Attitudes Toward Smoke-Free Policies. The consensus on smoke-free policies was that the policies were important to protect nonsmokers and children from exposure to secondhand smoke. The following subthemes emerged from the focus group interviews: the potential for the policies to reduce smoking behaviors, policies invoking a feeling of being marginalized, social norms, and support for smoke-free housing. Disagreements arose on whether the policies influenced smoking behaviors: some smokers believed that the smoke-free policies in their facilities motivated them to reduce smoking, whereas others did not.

I was saying that [because of the] long walk from where I'm staying to the [designated smoking zone], I cut down. I don't feel like going downstairs to the corner and then having to go back. I [smoke] less.

—Male participant, current smoker, facility no. 4, partial outdoor ban

I think the restrictions cause us to smoke more and not [less]. . . it doesn't take away the smoking. . . But forcing somebody to quit smoking. . . causes them to smoke more.

—Male participant, current smoker, facility no. 1, time-controlled partial outdoor ban

Most participants reported that although adherence to a complete ban on smoking would be challenging, it would bring them closer to quitting smoking

Table 4
Selected Quotes Related to Themes From Focus Group Interviews

The Use of E-cigarettes

"I've tried two of the regular-looking e-cigarettes. I didn't like them because they didn't taste like a real cigarette to me and because I went through it faster than I probably would have a pack of cigarettes and then also my brother enlightened me, he was like e-cigarettes they say they're supposed to be better for you because it's vapor this and that, but really it's not because it gives you the opportunity to smoke cigarettes in places where you can't smoke. So you're smoking that and you're in an environment where it's not smoking, but the e-cigarette is allowed, but technically yeah you're not harming anybody else, but you're still smoking . . . you're still harming yourself, so you're smoking more than you normally would smoke." (Female participant, current smoker, facility no. 6, no outdoor restrictions)

"I don't think there's a lot of research done on the harmful effects from the e-cigarettes or what's really in them, but I know that the first time I've ever tried to quit in my life I was successful [with the e-cigarettes] and I stayed quit for like a month and then I basically got pregnant and so I couldn't [smoke]. . . yeah an e-cigarette really helped me to quit smoking. Like even when I was pregnant and trying to quit smoking I used a patch, like the doctors prescribed me a patch to quit smoking and that didn't even work as well as the e-cigarette did." (Female participant, current smoker, facility no. 2, time-controlled partial outdoor ban)

"If they're forcing people to stop smoking [in] the workplace and the restaurants and the airports and this and that, saying you can't smoke outside on the sidewalk. You can't smoke anywhere within 100 feet or you can't do this, then people are going to those electronic cigarettes." (Male participant, current smoker, facility no. 5, partial outdoor ban)

The Addictive Potential of Cigarettes

"Their focus is on drugs and alcohol. . . Most drug facilities do not even focus on tobacco because it's not a [drug]. . . In fact you get a break to go smoke. Yeah you get smoke breaks. Their main concern is focusing on addiction. Like you know, even though nicotine is an addiction you might hear every once in a while somebody say oh, what about nicotine? Yeah. But then they [say], oh we're not talking about smoking. We're talking about cocaine, heroin, methamphetamine. But they don't really like to talk about [tobacco], most drug places or counselors and stuff don't really like to talk about tobacco." (Male participant, current smoker, facility no. 5, partial outdoor ban)

Interest in Smoking Cessation

"I think education as far as, you know stop smoking and stop drugging combined together. . . [there] needs to be more education in our program. I think [they] need to counsel us individually from an individual point." (Male participant, facility no. 1, time-controlled partial outdoor ban)

Attitudes Toward Smoke-Free Policies

"I understand nobody has to breathe your secondhand smoke, but if you're smoking outside, someone doesn't want to be near a cigarette they can move away and it won't affect them. But for me to be walking in a park or whatever and get stopped by the police and get a ticket, that's crazy. That's just more government control." (Male participant, current smoker, facility no. 1, time-controlled partial outdoor ban)

"I can understand that people are wanting to have a cleaner much more healthier, safer environment, but on the other hand smokers have their rights too. They should be able to go out, smoke a cigarette wherever they're at. . . Because we do get very harassed. I mean it's to the point where you really can't smoke anywhere and god forbid you are smoking at a bus stop or something and. . . I mean you get harassed. It's almost like if you were doing drugs out on the street." (Female participant, current smoker, facility no. 3, partial outdoor ban)

"It's kind of scary being a heavy smoker knowing that it may put my livelihood in jeopardy, like my job or where I'm going to live. I might have to go to an area with more crime, more drugs, more violence just because they allow you to smoke and I can't get to the better neighborhood because they don't smoke." (Male participant, current smoker, facility no. 1, time-controlled partial outdoor ban)

"If I'm given a restriction I'm going to do it, you know I'm going to go by it. So I think that it would help me stop smoking, that it would encourage me to stop smoking. I have kids and they hate that I smoke, so I have to, you know go and hide outside or whatever, even if I was allowed to smoke inside, but if I move to a place where there's no smoking allowed that would give me. . . that would be, you know an incentive to quit smoking." (Female participant, current smoker, facility no. 7, no outdoor restrictions)

Vulnerability to Tobacco Industry Marketing

"I remember when. . . a couple of years back they used to have this commercial for Newports and it'd be like a dude. . . a DJ. . . a black dude. You know and I even had something to say about like when they started the Blu [e-cigarette]. . . I was like oh my god, they're allowing smoking on TV because you don't really see that too often. I don't remember seeing a commercial promoting smoking, so it was like advertising directed to me, but the whole Newport thing, that was a whole culture, you know like this is what you do, you're cool, you're high, you're drinking and by the way, have a Newport." (Female participant, current smoker, facility no. 6, no outdoor restrictions)

Interest in Smoking Cessation

"Directors should think about it more from a healthy living and a stable environment like exercising, like yoga and eating right and providing nutrition education, the more you promote that the easier it is [to stop smoking]. . . when you're healthy and you're exercising then the last thing you want is a cigarette." (Female participant, facility no. 6, no outdoor restrictions)

completely. A minority of current smokers invoked feelings of smokers' rights or preserving one's autonomy to smoke; these smokers felt marginalized

by neighborhood-wide or countywide smoke-free policies. Most smokers recognized that smoke-free policies were an indicator of social

norms around smoking, and all former smokers discussed the denormalization of tobacco use as one of the primary reasons for quitting cigarette smoking. A

few smokers believed that the denormalization of tobacco was more common in more affluent neighborhoods than low-income neighborhoods, where smoke-free policies were uncommon.

Most participants did not express concerns about making the transition to smoke-free multiunit, low-income housing or permanent supportive housing for formerly homeless individuals. Some participants stated that their tobacco behavior had changed because of their current facility's smoke-free policies, and this prepared them to make the transition to smoke-free housing. Most participants reported that they would choose permanent housing over being homeless, regardless of strict smoke-free policies.

The Use of E-cigarettes. We categorized responses to the use of e-cigarettes into the following subthemes: curiosity about e-cigarettes, ambivalence toward e-cigarettes, interest in using e-cigarettes indoors, and interest in using e-cigarettes for cigarette smoking cessation. All participants expressed curiosity about e-cigarettes. One former smoker reported that she had started using the e-cigarette because of its flavors, stating that "they taste good," despite the fact that she had quit cigarette smoking. However, most current smokers expressed ambivalence toward e-cigarettes, reporting concerns about the high levels of nicotine in these products, the potential for substituting one addictive product for another, and the possibility of increasing nicotine addiction by using both e-cigarettes and regular cigarettes.

Participants disagreed on whether the use of e-cigarettes should be permitted indoors. Some smokers expressed interest in using e-cigarettes indoors because they perceived e-cigarettes to be safer than cigarettes.

Now, I don't believe they [should] smoke regular cigarettes in the room. I don't feel that that's acceptable. Obviously. Because it stains the walls and the clothes and all that, I don't agree with that but the e-cigarette I don't see the evil in that because it's a vapor. . . No different than air mist. Potpourri.

—Female participant, current smoker, facility no. 4, partial outdoor ban

Other smokers expressed sentiments of "disgust" with the practice of using

e-cigarettes indoors, believing that use of e-cigarettes indoors should be regulated. Some smokers reported that they had used the e-cigarette as a smoking cessation aid. One of the participants reported that the e-cigarette was more effective than approved pharmaceutical therapy for smoking cessation. A minority of participants believed that the increase in the use of e-cigarettes was a result of increasing restrictions on cigarette smoking.

The Addictive Potential of Cigarettes. The addictive potential of nicotine was a common theme that emerged in all focus group interviews. The subthemes included the addictiveness of nicotine compared with other substances of abuse, the culture of tobacco use in substance use recovery programs, and inadequate treatments for nicotine dependence.

The consensus was that nicotine was more addictive than any other substance of abuse, and that current strategies to address nicotine addiction were inadequate.

I think that number one is that smoking is very, very addictive. . . People are smoking on their deathbeds. People are smoking with holes in their throats. People see their moms or parents die, their family die and they still smoke. You have to think about something that will get to those people that have this mindset and this addiction that they're going through, you know because it's really hard. It's really, really hard.

—Female participant, current smoker, facility no. 7, no outdoor ban

Participants described the culture of smoking in substance use recovery programs and homeless service settings, noting that although nicotine was recognized as an addictive substance, treating nicotine addiction was not a priority when compared with treating alcohol or drug dependence. A few participants reported receiving advice from their health care providers or substance use counselors to avoid smoking cessation and cessation of other illicit substances concurrently.

Vulnerability to Tobacco Industry Marketing. Participants described their vulnerability to tobacco industry marketing when discussing their addiction to nicotine. A few participants

felt targeted by the tobacco industry, recognizing that the industry exploited their nicotine addiction and challenges with smoking cessation. Participants were aware that the tobacco industry was marketing e-cigarettes specifically to low-income, youth, and young adult populations by placing advertisements for new products in low-income neighborhoods and using "subliminal messaging" to normalize the use of these products among low-income populations. A few participants also reported that the marketing of certain types of products was directed toward racial/ethnic minorities and subcultures ("Marlboros are for cowboys").

Interest in Smoking Cessation. Almost all participants expressed an interest in quitting cigarette smoking; few current smokers never expected to quit smoking. The following subthemes emerged from the discussion on smoking cessation: barriers to the use of approved pharmaceutical aids, the efficacy of antitobacco campaigns, the potential for financial incentives to trigger change in smoking behavior, and components of a tobacco control program.

Some participants discussed barriers to obtaining approved pharmaceutical aids for smoking cessation and reported that if these barriers were eliminated they would be more likely to attempt smoking cessation.

A lot of us are on low income health insurance, Medi-Cal, and I've heard about Chantix, want to try it. . . I'm at a point where I like to smoke, but I'm ready to quit, but it's just being able to quit and so like if Medi-Cal or that low income health insurance provided that prescription in their coverage which I don't think they do.

—Female participant, current smoker, facility no. 6, no outdoor ban

Many participants referred to advertisements from the Centers for Disease Control and Prevention, The Tips From Former Smokers campaign, as an effective antitobacco strategy. Current smokers reported being "moved" by testimonials from former smokers who had suffered the serious health consequences of smoking, and they appreciated visuals of the harmful effects of tobacco, particularly if they had not yet

experienced them. However, a minority of smokers had a dissenting view that images that were “too extreme,” such as the “lady with a hole in her throat,” were ineffective in triggering change in smoking behaviors. Most smokers responded favorably to incentives to quit cigarette smoking, in the form of monetary incentives, passes to leave the facility for a break, or “credit” toward requirements for their program.

The consensus was that not enough providers discussed smoking cessation with smokers, and that multiple types of treatments should be offered to smokers in a quit attempt. Participants reported that “everything” should be offered to clients interested in smoking cessation, including “psychiatrists, acupuncturists, medications, anything that there is, offer everything.” Many participants expressed interest in attending a “mandatory” smoking cessation class in their programs that was integrated with treatment for other addictions and that discussed the health effects of smoking and included visual imagery of the effects of smoking on the body (“show us pictures of messed up lungs”). Participants reported that offering nicotine replacement therapy and incentivizing clients to attend the classes would increase motivation in engaging in smoking cessation behaviors. Some participants also reported that programs that focused on healthy living, including nutrition and exercise, might motivate change in smoking behaviors.

CONCLUSION

In this study of sheltered homeless adults, there was strong support for indoor and partial outdoor smoking bans, including time restrictions on smoking. Perceived antitobacco norms were higher in facilities with outdoor restrictions on smoking. However, misperceptions about the use of e-cigarettes may reverse the normative effects of smoke-free policies on reducing tobacco use behaviors among homeless adults. Our findings highlight public health priorities in order to reduce tobacco use among the homeless population.

All participating shelters had implemented indoor smoke-free policies, and five facilities had outdoor

smoking restrictions that extended beyond what was required by California state law. Although participants disagreed about the policies’ effects on reducing smoking behaviors, there were no disagreements about the benefits of the policies on reducing secondhand smoke exposure in residential settings for homeless and formerly homeless individuals. The widespread support for smoke-free housing, including permanent supportive housing where smoke-free policies are uncommon,¹⁶ highlights the feasibility of implementing such policies in shelters, permanent supportive housing, and low-income, multiunit housing.

Results from the cross-sectional survey showed no association between facility policies and smoking behaviors. Participants in the facilities with the time-controlled partial outdoor ban had the shortest lengths of stay compared with those in other facilities, suggesting that longer exposure to the policy could result in more reductions in smoking. Responses may also be susceptible to recall bias, highlighting the need for biomarker-verified measures of tobacco use and cessation among homeless smokers. Residual confounders, such as participation in employment or school, may also influence smoking behaviors and were unaccounted for in this study.

One potential threat to the policies’ effects on denormalizing tobacco use is the use of e-cigarettes. The motivations for the use of e-cigarettes in our study were similar to those observed in population-based studies.^{11,17} The high level of curiosity, the fact that former cigarette smokers were using these products, and the lack of knowledge on their potential harm raise the possibility that more individuals could use these products indoors. The concurrent use of cigarettes and e-cigarettes may also indicate a high level of nicotine dependence and increased difficulty with cigarette smoking cessation among homeless smokers.² Findings highlight the need for studies to characterize the use of e-cigarettes among the homeless population, and the need for public health campaigns to educate individuals that these products are unregulated, are unsafe to use

indoors, and are not approved for smoking cessation.

Disagreements arose on whether facilities should ban smoking completely, with some participants raising concerns that such policies violated their rights to smoke. The smokers’ rights argument has posed a barrier to implementing smoke-free policies in other settings that serve clientele with high rates of smoking (e.g., military establishments, inpatient psychiatric hospitals, or correctional facilities).^{18–20} In these settings, tobacco “exceptionalism,” where tobacco use is condoned when compared with the use of alcohol or drugs, is common.^{18–20} However, such perceptions are discordant with efforts to encourage healthy behaviors among these populations.⁷ In our study, although a minority of participants expressed concerns about their autonomy to smoke, most demonstrated cognitive dissonance by expressing both discontent with a complete ban on smoking and acknowledgment that such policies would encourage smoking cessation. These findings refute claims that smoke-free policies would lead to lower occupancy rates or negative reactions from clientele of shelters,²¹ and suggest that they may encourage smoking cessation among homeless adults.

Despite widespread interest in smoking cessation, high levels of nicotine addiction and the perceived lack of access to approved medications for nicotine dependence posed barriers to smoking cessation. Additionally, the vulnerability to tobacco industry marketing and the increased exposure to tobacco advertising in low-income neighborhoods may further hinder tobacco cessation attempts among homeless adults.^{8,22} Countermarketing strategies²³ and antitobacco campaigns, such as the Center for Disease Control and Prevention’s Tips From Former Smokers campaign, that highlight the health effects of smoking²⁴ may be effective strategies to further denormalize tobacco use among the homeless population. Homeless service settings should also consider integrating treatment for smoking cessation with treatment for other substance use disorders, and incorporating education on smoking cessation with other programs focused on healthy behaviors.

SO WHAT? Implications for Health Promotion Practitioners and Researchers

What is already known on this topic?

In California, homeless shelters have implemented smoke-free policies, and these policies may de-normalize tobacco use in the homeless population—a population with high rates of smoking. Little is known about attitudes toward these policies among homeless adults.

What does this article add?

Homeless individuals were supportive of smoke-free policies in shelters and expressed potential support for such policies in permanent supportive housing or low-income, multiunit housing. However, widespread curiosity about e-cigarettes and the misperceptions that they were safe to use indoors could threaten antitobacco norms.

What are the implications for health promotion or practice or research?

Our findings highlight the feasibility of implementing smoke-free policies in shelters and housing for vulnerable populations, and they present opportunities to educate people about the potential risks of e-cigarette use on the environment and on cigarette smoking cessation among homeless adults.

This study had several limitations. Shelters participating in our study were self-selected and a nonrepresentative sample; thus, our findings cannot be generalized to shelters in other parts of the United States. Focus group participants may not be representative of the general homeless population, potentially leading to a selection bias. However, the prevalence of smoking and the demographic characteristics of participants in our study were similar to previous studies of homeless adults.²⁵ Participants in our study were also representative of the overall sheltered homeless population in San Diego County in age, gender, and race/ethnicity distributions.¹³ The study was conducted in California, a state with strong antitobacco norms; it is possible that homeless adults in other states may have different perspectives on smoke-free policies.

Smoke-free policies are an effective tobacco control strategy to change

norms around smoking and reduce smoking behaviors. Our findings highlight the feasibility of implementing these policies in homeless shelters and housing for vulnerable populations in order to reduce secondhand smoke exposure among nonsmokers and smoking behaviors among smokers. The widespread curiosity and misperceptions about e-cigarettes could potentially threaten antitobacco norms. This highlights opportunities to educate about the risks of e-cigarettes and their potential impact on the environment and on cigarette smoking cessation among homeless adults.

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