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*Research article*

## **A Qualitative Study to Assess Factors Supporting Tobacco Use in A Homeless Population**

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**Abstract:** *Purpose:* Homeless adults have a higher prevalence of smoking compared to the general population. Most tobacco cessation efforts have focused on the general population, with limited attention paid to this vulnerable population. In this study, homeless adults as well as shelter staff were interviewed to understand their attitudes and beliefs about smoking and smoking cessation, and receptiveness to smoking cessation interventions. *Methods:* Semi-structured, one-on-one interviews were audio recorded and transcribed for 13 homeless adult smokers and 9 staff recruited from a homeless shelter in Charleston, South Carolina. Transcripts were analyzed in a systematic manner by independent investigators trained in grounded theory. The constant comparison method was used to code, categorize and synthesize the qualitative data. *Results:* The majority of smokers interviewed expressed the desire to stop smoking, but felt that stress from being homeless was a barrier to quitting. When asked about different tobacco cessation methods, there was no preferred method and there was skepticism regarding actual effectiveness of different methods, since many had previously

been unsuccessful when tried by these smokers. Shelter staff acknowledged that tobacco cessation was important, but did not see it as a priority for shelter residents. Even though cessation medications are available in the shelter clinic, very few of the smokers or shelter staff interviewed were aware of the availability of these medications. *Conclusions:* This study suggests that adult smokers in a homeless shelter are interested in quitting smoking and receptive toward assistance, but that lack of awareness and perceived importance of cessation among staff is a significant barrier. Providing training to staff and encouraging them to take a proactive approach to tobacco cessation may be an area to focus future cessation interventions.

**Keywords:** tobacco cessation; homeless; smoking; homeless shelter; homeless smoking; homeless shelter staff

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## 1. Introduction

Tobacco use is the leading cause of preventable death worldwide and accounts for 1 in 5 deaths annually, with current trends projecting eight million deaths annually by 2030 [1]. With the aid of nicotine replacement therapy (NRT), prescription medications, and counseling, smokers have numerous options available to assist them in smoking cessation. Over the past decade, the prevalence of tobacco use has declined in the United States to slightly less than 20% [1]. However, while the rate of smoking has declined substantially over time in people with no or low levels of psychological distress, much smaller reductions have occurred in people with high levels of distress [2].

Homeless smokers in particular represent a distinctively disadvantaged population with high rates of smoking as well as high-risk smoking behaviors [28]. Data from the 2003 Health Care for the Homeless User Survey revealed a smoking prevalence of 73%, highlighting a major health disparity [3–6]. Federal initiative data found 80% of homeless adults reported being a current smoker in the previous 3 months [7]. National survey data suggests that as much as 84% of homeless smokers report a desire to quit smoking, which is similar to smokers with no history of being homeless [5,8].

Cessation trials within underserved populations, including the homeless, have shown mixed results. Studies have included motivational interviewing, group visits, cognitive behavioral therapy, financial incentives and/or pharmacotherapy, including NRT, bupropion, and varenicline [4–6,9–11]. Quit rates with the various combination of modalities have ranged from 13% at 26 weeks to 16% at 12 weeks in another study [4,10]. In comparison, quit rates in the general population range from 26–32% with medication combination and counseling [12]. Studies have shown smokers from disadvantaged backgrounds are reluctant to use smoking cessation services due to a fear of failure or judgment. Participants have reported feeling guilty about continued smoking habits, skeptical about the effectiveness of NRT, and unable to cope with life stressors without cigarettes [20]. Yet a more

recent survey of homeless smokers found NRT was thought to be most effective [28], suggesting a possible shift in the view of NRT.

Prior qualitative studies of disadvantaged smokers have found smoking cigarettes was used as a coping mechanism to deal with emotional distress and boredom [16,17]. While motivations for participants to quit often included cost, health, and partner desire, these motivators were often not significant enough to prompt permanent change [17]. The same themes of stress and anxiety have been identified in the homeless culture [28], which embraces tobacco use and contributes to the challenge of successful cessation [17]. A focus group of homeless adults reported stress, boredom, and the pervasiveness of smoking in their culture to be a barrier to cessation and perhaps even caused them to smoke more and/or use alternative methods to acquire tobacco, such as smoking butts [18].

One 12-week program in Australia examining the potential of a smoking cessation program provided by nursing staff in a homeless program found decreased cigarette consumption, more financial savings, and improved or stable mood among homeless smokers. While long term quit rates were not significant, one third of participants made a quit attempt during the study and one third reported a reduced cigarette consumption of 50% at 6 months [11]. Other studies found that training and utilizing shelter staff to provide tobacco cessation treatment resulted in increased acceptance of tobacco-related interventions among homeless smokers [29].

While the high desire to quit smoking in the homeless population is encouraging, this is a challenging and unique population where cessation has been difficult to achieve. Additional qualitative research on the homeless culture and lifestyle may provide valuable insight into their health behaviors and provide guidance for future cessation interventions. This study builds on the body of research by focusing on the perspectives of staff and residents working at a homeless shelter. The aim of this study was to explore the behaviors, beliefs, and attitudes towards tobacco use and cessation in the homeless population as well as the beliefs and attitudes of homeless shelter staff as it relates to supporting efforts by residents to stop using tobacco.

## **2. Methods**

Due to the unique challenges of achieving smoking cessation in the homeless population, it is important to gain the perspectives of homeless individuals directly. Additionally, interviewing staff may offer valuable insights, since they work with the homeless population on a daily basis. Qualitative methods were utilized for this study, as they are well suited to explore gaps in knowledge, understand context, and to understand the perceptions and values that motivate decision making [13,14]. Specifically, grounded theory was used to explore perspectives in the most open-ended way possible [15].

### **2.1. Study Site and Target Population**

Key informants were selected from a homeless shelter in Charleston, South Carolina that provides up to 150 beds for homeless adults and children. Shelter residents aged  $\geq 18$  years who self-identified as smokers were invited to participate in one-on-one, semi-structured interviews lasting 15–30 minutes. Subjects were recruited over two evenings during shelter check-in, at which time the principal investigator provided information about the study and offered individuals a chance to schedule an interview during prearranged time slots. All shelter staff ( $n = 60$ ) were invited to interview as well via email; 9 (15%) responded to the invitation. Redundancy of participant experiences was used to determine sample size. The interviews concluded after 13 shelter residents and 9 staff was interviewed, as no new themes were emerging.

## 2.2. *Data Collection*

Questions were designed to elucidate the following: smoking patterns, level of dependence, desire to quit, prior quit attempts, opinions regarding cessation aids, barriers to cessation, community support, policy change perception, and cultural challenges. Questions were developed with input from tobacco cessation experts, and were pilot tested on two smokers and one non-smoker to heighten understanding. The semi-structured interview guide explored themes in each of those areas, while still allowing for conversation to develop between the interviewer and the participant. During the interview, residents and staff were shown a binder with pictures representing various tobacco cessation strategies, both medication and behavioral, and were then asked opinions about each. Examples of the images include a picture of two adults talking with the word “counseling” across the top. Other images were of cessation products. All questions were open-ended with the exception of asking for participants’ specific experience, if any, with the various tobacco cessation strategies shown in the binder. The interview guide is available upon request.

Both resident and staff participants received a \$25 voucher for study remuneration. Prior to the start of the interview, subjects provided informed consent to the study and to having the session audio recorded. Additionally, each participant filled out a de-identified questionnaire including demographic information and current smoking status. The Medical University of South Carolina Institutional Review Board approved the study protocol.

## 2.3. *Data Analysis*

All recorded data was transcribed verbatim and de-identified for use in analyses. Transcripts were analyzed in a systematic manner by three independent investigators trained in qualitative research methods. Within the tradition of grounded theory, the constant comparison method was used to code transcribed interviews and synthesize the qualitative data [15]. First, three investigators independently applied line-by-line open coding to the transcripts. Each member created memos to document insights, sorted codes into categories, and then met to compare common themes. This

inductive process was repeated until no new themes emerged. Differences were resolved through discussion and further review of the data. The final coding structure consisted of 22 nodes, which were applied to each transcript by two researchers. A team meeting took place after initial analyses of two transcripts to evaluate consistent use of codes among the investigators. Finally, codes were compared across interviews to identify similarities and differences in the reoccurring concepts. The qualitative software NVivo 10 was used to facilitate analysis and report the coded data. Quotes exemplifying each theme are presented below.

### 3. Results

**Table 1. Resident Demographics.**

	N (%)
<b>Sex</b>	
Male	13 (100%)
<b>Race</b>	
White/Caucasian	6 (46%)
Black/African American	5 (39%)
Hispanic or Latino	2 (15%)
<b>Marital Status</b>	
Married/Living with Partner	0 (0%)
Divorced or Separated	8 (67%)
Widowed	1 (8%)
Never been married	3 (25%)
<b>Children</b>	
Yes	11 (85%)
<b>Education</b>	
Less than high school	1 (8%)
High school or General Educational Development (GED)	6 (46%)
College Degree	6 (46%)
<b>Employed</b>	
Yes	2 (15%)
<b>Medical Conditions</b>	
High Blood Pressure	8 (62%)
Stroke	2 (15%)
Anxiety	3 (23%)
Drug Abuse	2 (15%)
Diabetes	1 (8%)
Depression	5 (39%)
Alcoholism	4 (31%)

**Table 2. Resident Drug, Alcohol, and Smoking History.**

	<b>N (%)</b>
<b>Ever used drugs not prescribed to you by a doctor?</b>	
Yes	7 (54%)
<b>Do you drink alcohol?</b>	
Yes	3 (23%)
<b>Alcohol Preference</b>	
Beer	5 (83%)
Wine	1 (17%)
Liquor	0 (0%)
<b>Ever drink excessively?*</b>	
Yes	2 (25%)
<b>Think you drink too much?</b>	
Yes	3 (38%)
<b>Last time binge drank**</b>	
Never	1 (10%)
More than 12 months ago	5 (50%)
3 to 12 months ago	3 (30%)
Within the last 3 months	1 (10%)
<b>Tobacco Use</b>	
Current Smoker	13 (100%)
Former Smoker	0 (0%)
Non-Smoker	0 (0%)
<b>Tobacco Products Used</b>	
Cigars	2 (15%)
Cigarettes	13 (100%)
Smokeless Tobacco (Dip, snuff)	2 (15%)
<b>Fagerstrom Nicotine Dependence Score<sup>30</sup></b>	
Very Low	3 (23%)
Low	2 (15%)
Moderate	2 (15%)
High	4 (31%)
Very High	2 (15%)

\*Excessive drinking was defined as 3 or more drinks per day for men or 2 or more drinks per day for women. \*\*Binge drinking was defined as greater than 5 drinks for men or 4 drinks for women at one time.

For reporting purposes, individuals living at the homeless shelter are reported as “Resident”, individuals working at the shelter will be reported as “Staff”, and the individual conducting the interview will be denoted as “Interviewer”. Resident demographics (Table 1) and social history (Table 2) are provided as well.

### 3.1. *The Importance of Tobacco Cessation*

Shelter residents did not perceive a difference in the importance of homeless smokers and non-homeless smokers quitting smoking, though they did recognize that the homeless population already has significant psychosocial problems. They felt it was just as important for them to quit as it is for any other population.

*I think it's important for anybody to try to quit smoking. Homeless or you have it all. (Resident 9)*

Most shelter residents (69%) said they would like to quit and felt complete cessation was necessary versus cigarette reduction. Most residents recognized that they were addicted to smoking and felt that was the main reason they smoked, although some felt that because they had quit for brief periods of time in the past that they were not addicted.

*Nicotine is an addictive drug. You wake up in the morning—you feel the need—just like you do for heroin probably. But there's also a psychological factor... that, you got good news on the phone, "Hey let me get a cigarette—I got good news!" You got bad news. "Damn it, I need a cigarette." (Resident 1)*

Compared to the residents, the shelter staff did not feel smoking cessation was as much of a priority for homeless residents. All agreed smoking is harmful and that cessation is desirable, but only three felt it should be a priority while homeless. One third of shelter staff interviewed felt the urgency of quitting depended on the health status of the smoker, while another third did not feel it was important to quit while homeless. Over half (55%) of the staff had not encouraged tobacco cessation among shelter residents, as they did not feel they were in a position to do so unless the issue arose in another context, such as specific health issues. The residents concurred that staff seldom encouraged smoking cessation among them.

*...in my perspective . . . [quitting smoking is] not important at all. I mean housing doesn't have anything to do with smoking. So I don't think it really factors into that. I think a person's health is like the next thing that you get to, but in my opinion, I think housing is health, so I think the first thing as homeless service providers should focus on is how can we get someone housed. And then let's work on the other things. (Staff 6)*

### 3.2. *Shelter Policy*

The shelter had a no-smoking policy that had been created and implemented in the previous year. Residents and staff were both aware of the no smoking policy, although consequences for breaking the policy were less clear. Some staff felt the no smoking policy was a burden to the residents at the shelter and might prevent some smokers from staying there, though staff and

residents agreed that the policy was followed most of the time. When asked why he did not approve of the non-smoking shelter policy, one staff member provided the following explanation:

*I think people have enough issues they're working on while they're here and smoking doesn't even enter their top 4 after homeless, income source, mental health issues, and other substance abuse. And to pile "you can't smoke" on top of that may be just adding...if that's how someone deals with stress. It's [smoking] probably not the end of the world right now. (Staff 8)*

### 3.3. Motivation to Quit

Many residents reported having family members who had successfully quit, but were unable to determine why their family members had been successful in their cessation efforts. Family also provided a strong motivation to quit.

*Well, my grands, if they do see me [smoking] they'll look at me and start crying and I just can't deal with that. So I sneak a smoke when I'm around them. But they don't like me to smoke at all, especially my baby girl. (Resident 12)*

*How does that make you feel? (Interviewer)*

*Rough. Sad. It's what gives me the initiative to try to quit all together. (Resident 12)*

*At that moment, when I saw my daughter, everything changed in my life. So, I quit everything. I quit drugs. I quit alcohol. I quit cigarettes. Then my life changed again. I start to work. We are living together, and that was great. And the cigarette, I don't care. I don't like it. It's fine because I have my family now. But that was the first time I quit. I did it for maybe two years. But some time start with troubles with my family and my daughter, her mother, changed everything. Yet again to the street...in that moment, I start again to smoke...I like to quit but I don't do it. (Resident 13)*

Personal influence on others was something many had not considered, although some residents stated they tried to avoid smoking around children as they did not want to set a bad example. Even with limiting their smoking around other people, they still recognized their behaviors might be influential, albeit this was not viewed as a significant enough reason to stop smoking.

The cost of cigarettes and the health effects of smoking were also mentioned by some residents as potential reasons to quit smoking.

*I think if I had a set of chest x-rays and he said, "You need to quit like now." Or said you're early stage 1 cancer or pre-emphysema or starting to get it. I'm absolutely sure I could do it. Here's the kicker about it, and this is terrible to say. I have not felt a lot of adverse effects even though I smoke close to a pack a day...It could be two down the road, it could be a year down*



*the road killing me. But it hasn't affected me physically where I feel like, "Wow I've got to stop."* (Resident 1)

*I smoke menthol. I can't smoke regulars. At first I smoked regs, and being out here on the streets sometimes you're limited to what you can buy...so I was like well, you know they're like \$1 a pack. Let me try those menthols. Got back on menthols because you can't go wrong with a menthol.* (Resident 3)

*It's [smoking] kind of expensive, I mean I have a lot of doctor's appointments. If I could stop smoking, it would sure help with a lot of ends left, especially with a fixed budget like I am...I buy looseys if I ain't got it. You know...2 for \$0.50.* (Resident 2)

### 3.4. Barriers to Tobacco Cessation

Homelessness as an environment was perceived as having a significant impact on smoking behavior. Many residents cited the stressors associated with being homeless as a major barrier to tobacco cessation, since smoking was perceived as a means to relieve stress. Other outlets for stress were not readily identified in this setting. Some residents did not feel that homelessness directly impacted their smoking, but that it affected them indirectly due to increased amounts of stress, making cessation more improbable. Even with the shelter providing a place to sleep, residents still felt anxiety regarding their future. Overall smoking was seen as one of the few pleasures still available to them.

*Everybody here is under a certain amount of stress. And you're living on top of each other in the dorm. Here's stress everywhere you look here, and it's hard to be calm and relaxed. And I think you have to be calm and relaxed to quit.* (Resident 1)

Smoking was also seen as a way to pass the time when bored. Residents are not routinely allowed into the shelter during the day as they are tasked with searching for a job or attending classes/meetings. Some residents reported physical limitations preventing them from venturing far from the shelter, while others simply stated that they had nothing else to do some days other than sit around.

*A lot of walking around. Very boring. Trying to find something to do, and smoking a lot of cigarettes. The less I have to do the more I smoke.* (Resident 9)

The staff also recognized the challenge of quitting while living in the shelter. Most staff felt it would be unlikely that residents would quit while homeless because of the stressors and challenges of being in such an environment. Staff believed that smoking at the shelter provided a means of socialization for a population that can be very isolated at times. They believed some residents desired

to quit smoking, and could quit if they “put their mind to it”, but most staff felt it was unlikely the residents would quit.

*I think a lot of it has to do with the stressors that are involved in most cases of people experiencing homelessness. And if you're taking away someone's ability to deal with those stressors, at the point where it could be acute, I think that could be bad. (Staff 6)*

*I think that being in a state of homelessness is extremely stressful, and you know nicotine helps you calm your stress. I think it is a routine thing they do with they community members here...it's a very big bonding social experience. (Staff 1)*

### 3.5. Cessation Preferences and Relapse

Resident thoughts regarding cessation strategies are summarized in Table 3. Though such counts may not be customary in some qualitative studies, the percentages suggest patterns for future hypothesis generation and intervention mapping. Many homeless residents mentioned experimenting with cessation therapies once or twice, but only 2 (15%) had actually tried to quit using one or more of the listed strategies. There was not an overall consensus on what the majority would like to try in the future. Although not pictured, quitting “cold turkey” was a common method that residents had tried in the past (54%), and one that many residents planned to utilize in the future.

**Table 3. Resident Experience with Cessation Therapies.**

	Helpful N (%)	Not Helpful N (%)	Unsure/Never heard of N (%)	Would try N (%)
Patch	4 (31%)	9 (69%)	0 (0%)	1 (8%)
Gum	5 (38%)	7 (54%)	1 (8%)	3 (23%)
Group Therapy	6 (46%)	7 (54%)	0 (0%)	1 (8%)
Varceline	2 (15%)	3 (23%)	8 (62%)	1 (8%)
Wellbutrin	1 (8%)	1 (8%)	11 (85%)	2 (15%)
E-cigarette	2 (15%)	10 (77%)	1 (8%)	4 (31%)
Financial Incentive	6 (46%)	4 (31%)	3 (23%)	2 (15%)
Contest/Drawing*	5 (38%)	7 (54%)	1 (8%)	3 (23%)
Individual Counseling	5 (38%)	7 (54%)	1 (8%)	1 (8%)
Lozenges	2 (15%)	6 (46%)	5 (38%)	0 (0%)
Inhalers	2 (15%)	4 (31%)	7 (54%)	0 (0%)
Quitline	3 (23%)	9 (69%)	1 (8%)	0 (0%)

\* A contest and/or drawing could be used as a competitive process to encourage cessation.

Most people (92%) were familiar with nicotine replacement gum and patches, but poor dental care was an issue some cited with regards to using the gum. There were polarizing views on the E-cigarettes, with some residents being very distrustful of them and worried they might be worse

than actual cigarettes while other residents felt they might be very helpful. The majority (77%) stated they doubted E-cigarettes were helpful, but when asked about which of the cessation methods they would consider trying, 31% stated E-cigarettes. A few residents thought financial incentives or a contest/drawing might work but no one could determine an appropriate monetary amount or prize that could persuade them to quit. Many of them recounted what had worked for a family member or friend, and that seemed to validate a particular strategy.

Despite the availability of cessation materials within the shelter, including medications, neither residents nor shelter staff members were aware of the variety of these services, with one staff as the exception. Most thought that patches might be an option but were unsure of anything beyond that. No one was aware of any local or community resources available for tobacco cessation other than some services at the Veterans Affairs Hospital. Even when residents attempted to use the cessation services while at the shelter they found barriers to their use.

*They'll give you the patch, but like with me, it goes in a medicine cabinet...All the patches are in there. I was putting them on and smoking. You're not supposed to do that. (Resident 4)*

Many of the residents had quit in the past and then relapsed during times of stress or depression. The stress and/or depression might have been work related or even health related. Most recalled just picking up a cigarette one day for no clear reason and not being able to put it back down.

*Four years. ...I was ripe. I was playing basketball; I was running—jogging 4 miles a day. I was entering 10k races; I was in the best shape of my life... I don't know what happened, I let my guard down. I got a job promotion. There was pressure at work. Wife was pregnant with our first, my son. I just was anxious and everywhere I turned there seemed to be something happening. Had a friend who just, they just lit up a cigarette, a Winston I remember, and it looked good. And I said, "Just give me one of those. What the hell."...Then went back after 4 years of quitting. That was about...18 years ago, something like that. (Resident 1)*

There was no consensus among staff regarding which cessation products or services could be most helpful. Some thought E-cigarettes might be a helpful alternative and a positive circumvention of the smoke free policy within the shelter. Others thought that E-cigarettes were worse than regular cigarettes.

#### **4. Discussion**

In this sample, homeless smokers desired to quit as much as, if not more, than reports of the general population, yet successful interventions to assist in smoking cessation in the homeless population are limited [8,9]. Our findings were similar as the majority of residents believed tobacco cessation was important, but they reported high levels of stress associated with homelessness and felt quitting while residing in the shelter would be challenging. Smoking acceptability at and around

shelters is commonplace, though there has been an increase in shelters creating non-smoking policies while on the shelter grounds [18,19].

This study found no clear cessation method on which the majority of residents agreed. Unassisted quitting was the most preferred method to quit, with strong skepticism of cessation products and mixed opinions regarding E-cigarettes. Most residents have tried to quit at least once, some with success for varying periods of time. Relapses were common during life stressors. The vast majority of residents believed they would eventually stop smoking, although they did not have a quit date selected.

While there is limited information available on the opinions or impact of shelter staff, it is believed that their role is very important. Overall staff did not place a high priority on tobacco cessation for the homeless. Despite the health concerns and unnecessary costs associated with tobacco use, smoking cessation was a topic that rarely came up in staff interactions with the residents, perhaps because they viewed stress while living at the shelter as an insurmountable barrier. They did not view smoking cessation as a way for some residents to regain some control over their lives. This view is similar to some healthcare professionals who doubt the homeless will be successful quitting due to comorbid health conditions and other life circumstances [19].

Some staff felt that a no-smoking policy at the shelter was too harsh and might prevent some homeless smokers from staying in the shelter. A study of homeless smokers from a California shelter that established a smoke-free policy found 75% of current smokers felt the policy was associated with decreased smoking and about 50% reported either attempting to quit or planning complete cessation. Less than 10% reported feeling displeased with staying in the shelter because of the smoke-free policy [21]. In this study, the residents were aware of the smoke-free policy and most thought it was followed pretty closely. While not specifically asked, residents and staff did not indicate that it was too burdensome. Most smokers just crossed the street to avoid smoking on the shelter grounds.

Increased support and awareness from all shelter staff may be one area for improvement, as this has been shown to increase homeless smokers' uptake of tobacco cessation interventions [29]. Training staff on the importance and availability of shelter services for tobacco cessation available is crucial, as neither staff nor residents were aware of the tobacco cessation products and counseling available through the medical clinic at the shelter. Additionally, staff felt unqualified to provide tobacco cessation advice to residents. Similarly, a survey of homeless shelter directors and staff found most supported an on-site tobacco control program, but they felt they did not have the expertise to implement such a program. Only about a third of staff felt comfortable providing cessation counseling, but the majority reported they would be open to additional training on tobacco cessation as others have found [22]. Studies have suggested that developing strategies to increase homeless smokers' skill, confidence level, and knowledge gaps surrounding tobacco cessation may be beneficial and is something all staff could do [10]. Part of changing the culture of smoking in

homelessness begins with those who interact with the homeless the most. Their belief and encouragement towards tobacco cessation may prove to be a powerful motivator.

Screening and brief interventions at the shelter level has also been suggested as part of comprehensive care for homeless smokers [19]. Viewing tobacco dependence as a chronic disease requiring long-term intervention and follow-up might help change the perception of cessation counseling for the residents. While no direct benefit exists for reducing tobacco use, cutting back may help to increase self-efficacy of smokers and increase the desire to quit smoking, which could ultimately lead to better cessation outcomes [23]. All residents at this shelter must go through an intake process including meeting with the nurse in the medical clinic. Each resident could be screened for tobacco use and then offered NRT and/or an appointment to consider other cessation products. As one resident mentioned, difficulty accessing NRT therapy as it was kept with other medications may be one barrier to cessation. Perhaps the shelter could allow residents the option of keeping their NRT with them or providing NRT such as gum or lozenges to all residents after check-in each evening.

#### *4.1. Strengths and Limitations*

Individual interviews provided an opportunity for homeless smokers to share their personal experiences and opinions regarding tobacco use in the homeless population. Since this study was conducted in only one homeless shelter, it might not be generalizable to all homeless shelters. There could have been self-selection bias in that only smokers interested in quitting were willing to sign up for interviews, although this inquiry was not promoted as a tobacco cessation study. The medical director of the shelter clinic was both the principal investigator in this study and the individual who conducted the interviews, but only one of the staff members had previously interacted with the investigator prior to participating in the study, and none of the residents had previous interactions with this individual.

The staff was interviewed in order to gain the perspective of those who work directly with the homeless population. All the staff from the shelter was invited to participate, although only 9 (15%) agreed to participate. Even though only a small number participated, no additional participants were recruited as no new themes were emerging during the final interviews. There was great variation in the amount of direct interaction with the homeless residents depending on the staff member's role. Staff members included administrators, counselors, health care providers, and other ancillary staff. Future interviews of staff might recruit only staff that spends the most time in direct contact with the residents of the shelter, which might lead to additional themes.

#### *4.2. Conclusions*

Homeless smokers recognized the importance of tobacco cessation and believe they will quit, but postpone quit attempts. The staff felt that while tobacco cessation was important, it might not be a priority while individuals are homeless. Educating the staff and residents on the available cessation resources within the shelter is necessary. Providing training to staff and encouraging them to take a proactive approach to tobacco cessation is critical, since most of the smokers are open to trying tobacco cessation despite the stress of homelessness.

### Conflict of Interest

All authors declare no conflicts of interest in this paper.

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