



# Public Housing Resident Perspectives on Smoking, Barriers for Smoking Cessation, and Changes in Smoking Mandates

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## Abstract

**Background:** Individuals from low-income groups report disproportionate rates of cigarette use, secondhand smoke (SHS) exposure with increased morbidity and mortality. Smoking bans in public housing have been enacted in attempt to reduce tobacco use and SHS exposure among lower income individuals. This study investigated the support needs of tobacco users living in two public housing complexes in Detroit, Michigan (USA), including their perspectives on smoking, resources and barriers for smoking cessation, and the impact of policy changes.

**Methods:** This is a mixed-methods study, using a qualitative focus groups approach and a short survey, public housing residents interview data was analyzed to explore themes related to smoking-related issues. Specifically, six themes were assessed across four focus groups: (1) Quitting Smoking, (2) Current Smoking Cessation Resources, (3) Legal Mandates, (4) Education and Perceptions of Smoking, (5) Community Needs and Barriers, and (6) Medical Experiences.

**Results:** There were 59 participants; the majority (39/42, 93%) of smokers reported at least one quit attempt. During the focus groups, several participants indicated a desire to quit smoking but reported barriers to smoking cessation, such as lack of access to medications, social triggers to continue smoking, and socioeconomic stressors. A number of suggestions were provided to improve smoking cessation resources, including support groups, graphic images of smoking-related diseased tissue, and better communication with health care providers.

**Conclusions:** These findings demonstrate smoking bans in two public housing complexes can be effective yet are dependent upon a complex set of issues, including numerous barriers to care.

## Keywords

barriers, low socioeconomic status, public housing, smoking cessation, smoking mandates

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**What Do we Already Know About This Topic?**

Higher rates of smoking among individuals of lower socioeconomic status disproportionately affect the health of this vulnerable population.

**How Does Your Research Contribute to the Field?**

This manuscript details the perspectives of people in two public housing complexes on smoking, resources and barriers for smoking cessation, and knowledge about changes in mandates for smoking in public housing.

**What Are Your Research's Implications Toward Theory, Practice, or Policy?**

Smoking bans in public housing may present a complex set of issues and the qualitative findings presented within may be used to create more refined trials with practical intervention and/or better inform policy makers of the needs of the target populations.

**Background**

Although conventional cigarette use among adults in the United States has declined substantially since 1965, certain populations continue to demonstrate higher rates and slower declines in smoking. Higher socioeconomic groups demonstrated the largest decreases in smoking across time,<sup>1</sup> whereas individuals with low-income continue to smoke at higher rates with longer durations of use, leading to widened disparities.<sup>2,3</sup> Nationwide, approximately 25% of American adults below the federal poverty level are smokers whereas in Michigan (USA), the percent is higher at 33%.<sup>4</sup> Homelessness plays a significant factor as it has been estimated that 70% of homeless adults smoke cigarettes.<sup>5</sup> In contrast, in households with higher incomes (greater than 400% of the poverty level) only 10% are smokers.<sup>1</sup> Given the higher rates of use among individuals of lower socioeconomic status (SES), it is unsurprising that smoking consequences disproportionately affect the health of this vulnerable population. Individuals of lower SES are more likely to receive medical diagnoses at later stages of chronic health conditions<sup>6,7</sup> and rates of lung cancer and mortality are higher.<sup>7-9</sup> The current smoking rate (28%) among those uninsured or with public health insurance (eg, Medicaid) is double that of those with private insurance.<sup>10</sup> Although disparities in access to health care have narrowed after the introduction of the American Care Act in 2017, individuals with lower household incomes continue to lack adequate health insurance coverage and access to primary care providers (PCPs), and in turn avoid seeking care due to costs.<sup>11</sup>

Secondhand smoke (SHS) exposure is also higher among lower income individuals<sup>12</sup> including those living in multi-unit housing, particularly African-Americans.<sup>1,13</sup> In response to evidence of the harmful effects of SHS and thirdhand smoke exposure,<sup>14</sup> efforts have been made to limit exposure in public areas, including public housing.

Since 2017, it is required that US public housing agencies institute a smoke-free policy which impacted approximately 1.2 million households.<sup>15</sup> Specifically, this policy prohibits the use of tobacco products in all living units and indoor

common areas in public housing, as well as all outdoor areas within 25 feet of public housing. Since implementation of the ban, it appears to have had a favorable impact on smokers with a reduction in SHS exposure,<sup>16</sup> with particular support for the ban on smoking in indoor common areas.<sup>17</sup>

Public housing smoke-free policies have resulted in decreases in cigarette consumption and SHS exposure.<sup>13,18</sup> In jurisdictions which have enacted comprehensive smoke-free policies in public areas, there has been some evidence of short-term reductions in smoking prevalence.<sup>19,20</sup> However, factors such as SES and treatment accessibility may limit this effect. Individuals with lower SES are less likely to quit smoking than those with higher incomes despite a comparable number of quit attempts<sup>3</sup> which may limit the success of public housing smoking bans or could lead to unintended consequences such as housing insecurity. Furthermore, these vulnerable populations may have unique barriers to smoking cessation such as high rates of smoking acceptability, psychosocial stress, deficient mental health management,<sup>21</sup> and limited access to quitting resources.<sup>6</sup>

The purpose of this study was to gain an understanding of the support needs of under-resourced urban tobacco users who live in public housing. Specifically, we were interested in residents' perspectives on smoking, resources and barriers for smoking cessation, and knowledge about changes in mandates for smoking in public housing.

**Methods****Study Method**

Using a mixed-methods approach a qualitative focus group approach and survey, public housing residents were interviewed at two sites located in Detroit, Michigan, USA. Participant responses were analyzed to explore themes related to pertinent smoking-related issues.

**Study Sample**

Inclusion criteria included volunteers 18 years old, current, former and non-smokers, living in public housing residences.

Sixty-three participants were recruited for focus groups at Brewster Homes (BH;  $n = 31$ ), a public housing property, and the Team Wellness Center (TWC;  $n = 32$ ), a public/transitional housing complex. TWC is a dedicated center providing an array of comprehensive behavioral, medical, and physical services including public/transitional housing. Participants were recruited using multiple methods including flyers posted at the participating sites, word of mouth, and informal invitations from staff at the sites. Four participants failed to complete the survey and were excluded, resulting in 59 participants included in the survey-related analyses. No other participants refused to participate or were otherwise excluded from the study. Non-smokers were included in this study as smoking in public places affects all residents, not just from second hand smoke exposure, but also from cleanliness and litter.

### Quantitative Survey

Participants completed a brief survey that assessed demographic and smoking-related variables. Demographic variables included age, sex at birth, current gender, race/ethnicity, and medical insurance status. Smoking-related variables included smoking status (current smoker, former smoker, non-smoker), number of quit attempts, method of quit attempt (eg, cold turkey, medication), and reasons for quit attempt.

### Focus Group Format and Procedures

Four focus groups were conducted on two different evenings. Two focus groups were held at Brewster Homes and two were held at Team Wellness Center. Participants were split into two groups at each site. The focus groups were facilitated by two Wayne State University Office of Community Engaged Research staff members (PJ, female, African-American, aged 40–60, community engagement specialist; BF, female, Caucasian, aged 30–40, public health researcher) who had more than 5 years' experience facilitating qualitative interviews in community-based participatory research. Participants were aware of the affiliations of the facilitators and that the theme of the discussions was to focus on smoking. The interviewers had no prior relationship with the study participants. A structured script and interview were developed in advance by the study team to address themes and topics which were then further refined and categorized on review of the recorded conversations. These were independently reviewed by two trained auditors with common domains agreed upon by consensus and outlined in [Table 1](#).

Interviewers were provided with a pre-structured discussion guide ([Supplemental material 1](#)). Follow-up questions were not scripted but flowed from participants' initial responses to address more fine-tuned themes and talking points. The duration of the focus groups ranged from one hour to an hour and a half. All the participants were asked to complete a demographic and social history survey. Each focus group was audio recorded and fully transcribed at a later time by two coders (BF

and AK, male, Asian, aged 30–40, community engagement specialist). In addition to study participants and focus group facilitators, each focus group was also attended by one or two note-takers and three representatives of Pfizer (the study funder as part of a quality improvement program). Pfizer representatives observed the focus groups but did not directly participate or ask any questions; all communication was handled by the focus group facilitators. Participants were compensated \$35 for their participation. The design, implementation, and publication of this study were done independent of study funder.

### Data Analysis

Quantitative survey data were entered and analyzed in REDCap<sup>®</sup>, a web-based data management system. Quantitative data on demographics and smoking-related variables were examined using descriptive statistics. Qualitative data analysis was completed using a thematic approach consisting of conventional content analysis and matrix tables. The transcriptions were dissected to identify themes and talking points as well as their frequency. Matrix tables were created to facilitate analysis of the data. Coding was done by hand by study staff using a grid system and framework analysis to categorize field notes. The analysis was done as a group. Discrepancies were adjudicated by the senior author. Data are presented as  $N$  (%) or mean (standard deviation; SD).

## Results

### Survey Data

Demographic and smoking-related data are presented in [Tables 2](#) and [3](#). Forty-seven percent of participants were recruited at the Brewster Homes (BH) and 53% were recruited at the Team Wellness Center (TWC) in Detroit, MI. Of the 59 participants who met criteria with complete data, average age was 45 years, 63% of participants were women, 85% were African-American, and most (83%) were receiving public health insurance benefits.

There were 43 participants (73%) who completed the survey and self-identified as lifetime smokers, with 26 current smokers, 14 former smokers, and 3 “unknown” smokers. Nearly all of the smoker participants (91%,  $n = 39$ ) reported that they had attempted to quit or successfully quit with the average 3.9 (SD 4.1;  $n = 26$ ) quit attempts. “Cold turkey” ( $n = 23$ ) was the most common quit method followed by nicotine patch ( $n = 8$ ). Health ( $n = 10$ ) was the most frequently reported quit attempt reason, followed by physician recommendation ( $n = 3$ ) and being “tired” of smoking ( $n = 3$ ).

### Smoking-Related Themes

Six themes were assessed across the four focus groups: (1) Quitting Smoking; (2) Smoking Cessation Resources; (3)

**Table 1.** Focus group discussion themes and topics.

Theme	Topic
Quitting smoking	<ol style="list-style-type: none"> <li>1) Quit Approaches</li> <li>2) Current and Former Smokers</li> <li>3) Number of Quitting Attempts</li> <li>4) Triggers</li> <li>5) Reasons to Quit</li> <li>6) Issues with Quitting</li> </ol>
Current smoking cessation resources	<ol style="list-style-type: none"> <li>1) Accessibility</li> <li>2) Current Resources</li> <li>3) Lack of Resources</li> </ol>
Legal mandates	<ol style="list-style-type: none"> <li>1) Public Housing Mandate</li> <li>2) No Smoking in Restaurants and Public Spaces</li> <li>3) No Smoking within Certain Distance of Buildings</li> <li>4) Legal Mandates' Influence</li> <li>5) Miscellaneous</li> </ol>
Education and perceptions of smoking	<ol style="list-style-type: none"> <li>1) Addiction</li> <li>2) Secondhand Smoke</li> <li>3) Quitting Perceptions</li> <li>4) Legal Mandate's Influence</li> <li>5) Peer-to-Peer Mentoring</li> <li>6) Miscellaneous</li> </ol>
Community needs and barriers	<ol style="list-style-type: none"> <li>1) Education</li> <li>2) Intervention Ideas</li> <li>3) Mental</li> <li>4) Physician–Patient Relationship</li> </ol>
Medical experiences	<ol style="list-style-type: none"> <li>1) Physician–Patient Relationship</li> <li>2) Impact of Smoking</li> <li>3) Changes in Healthcare</li> <li>4) Medical Setting Used</li> <li>5) Healthcare Navigation</li> </ol>

Legal Mandates; (4) Education and Perceptions of Smoking; (5) Community Needs and Barriers; and 6) Medical Experiences. Each of these themes was further broken down by common topics and talking points (Table 1) that were used to guide the qualitative interview. Below, we provide participant quotes to further elucidate these themes.

### Theme 1: Quitting

Use of nicotine patch, medication, gum, and “cold turkey” were discussed frequently as cessation methods. Several participants identified “cold turkey” as a somewhat successful method, as reflected in the quote below.

“It definitely takes will power. And prayer. I pray every day to give me the strength to beat the cigarette or I be sitting there smoking a cigarette like I was after dinner.”

- Female Participant from (TWC)

Nicotine patch, gum, and smoking cessation medications were identified as methods used in past quit attempts. However, most participants found them ineffective.

“I’ve been using patches, the gum, Chantix® – not doing it, not getting it. So, I’m looking for some more help so I can stop.”

- Female Participant from (BH)

There were different levels of awareness regarding medications. Some knew of the medication Chantix® by name and had used it in past quit attempts. However, others were unaware of any medication but did express an interest in learning more. A few participants noted that they worry about experiencing or have experienced adverse effects.

“The side-effects were for me being a diabetic, when I put [multiple medications] together they didn’t work for me.”

- Female Participant (BW)

Stressful situations involving work, deaths of loved ones, traumatic events, family and life stressors were all identified as smoking triggers. The pressure of being around other smokers and wanting to be accepted by peers also pushed participants to start and continue to smoke.

“...I’d be around one of my boys and ... then I’d be like let me hit that...”

**Table 2.** Participant demographic data (presented as mean (SD) or n (%)).

Variable	Brewster Homes (n=28)	Team Wellness (n=31)	Total (n=59)
Age (years)	41.8 (17.7)	47.1 (12.3)	44.6 (15.2)
Sex at Birth	9 (32.1)	12 (38.7)	21 (35.6)
Male	19 (67.9)	18 (58.1)	37 (62.7)
Female	0 (0)	1 (3.2)	1 (1.7)
No response			
Current Gender	9 (32.1)	11 (35.5)	20 (33.9)
Male	17 (60.7)	18 (58.1)	35 (59.3)
Female	0 (0)	1 (3.2)	1 (1.7)
Other	2 (7.1)	1 (3.2)	3 (5.1)
No response			
Race	26 (92.9)	24 (77.4)	50 (84.7)
African-American	0 (0)	2 (6.5)	2 (3.4)
White	1 (3.6)	3 (9.7)	4 (6.8)
2 or more	1 (3.6)	2 (6.4)	3 (5.1)
No response			
Insurance Status	1 (3.6)	3 (9.7)	4 (6.8)
Private	25 (89.3)	24 (77.4)	49 (83.1)
Public (Medicare/Medicaid)	1 (3.6)	1 (3.2)	2 (3.4)
No insurance	1 (3.6)	3 (9.7)	4 (6.8)
No response			
Smoking History	7 (25.0)	19 (61.3)	26 (44.1)
Current Smoker	7 (25.0)	7 (22.6)	14 (23.7)
Former Smoker	12 (42.9)	4 (12.9)	16 (27.1)
Non-Smoker	2 (7.1)	1 (3.2)	3 (5.1)
No response			

- Male Participant (BW)

"...[Kids, they ] see everybody else do it so they go try to do it."

- Male Participant (BW)

Reasons for wanting to quit included the bad smell/taste, not wanting to have to smoke outside in the cold, wanting to be around for family, and being tired of smoking. Several individuals shared that they now have chronic obstructive pulmonary disease (COPD), asthma, and high blood pressure and choose to quit before making these conditions worse. Some participants reported that the increasing cost of cigarettes made it too expensive to smoke. Some also noted that they sell cigarettes to make a profit, and therefore prefer not to smoke them.

"I want to quit because it costs too much. You spend a lot of money on cigarettes. I spent maybe about \$100 in two weeks. Just packs of cigarettes."

- Male Participant (TWC)

"Healthwise. I've developed COPD. And I'm currently using inhalers and I don't want to use it to the point where I'm on oxygen. I want to stop while I'm here."

- Female Participant (TWC)

"I stopped when I had my first child, it was a long time before I smoked again."

- Female Participant (BW)

"My doctor said, make a choice. Do you want to live, or do you want to die? I have chronic bronchitis and asthma, so it was an easy choice for me."

- Female Participant (TWC)

"Basically, [I quit] one time, I pretty much, you know, I was incarcerated so I couldn't get none. I whole year. Soon as I got out, you know, first thing, I went to the liquor store."

- Male Participant (TWC)

Participants expressed challenges they have faced while quitting. Several shared that they had quit but shortly relapsed. One reported gaining weight from replacing cigarettes with food, and another attributed contracting pneumonia when quitting. One participant said that he has already experienced significant damage to his body related to smoking, and thus does not feel quitting will be helpful.

"The damage has been done. It's irreversible. [After their physician showed participant a picture of their lungs], I went right out and bought me some cigarettes and kept on movin'. I thought nothin' about it. But I know I'm gonna pay for it."

**Table 3.** Smoking and quit data (presented as mean (SD) or n (%)) for current and former smoking participants.

	Current Smoker (n=26)	Former Smoker (n=14)	"Unknown" Smoker (n=3)	Total (n=43)
<b>Attempted to quit in the past</b>				
Yes	24 (92.3%)	13 (92.9%)	2 (66.6%)	39 (90.1%)
<b>Number of past quit attempts</b>				
Mean number of times	4.71 (4.78; n=17)	2.5 (1.69; n=8)	1 (n=1)	3.88 (4.1; n=26)
Number of responses: Unknown	3	5	0	8
Number of responses: Do not know	2	0	0	2
Number of responses: No answer	2	0	1	3
<b>Type of quit attempt</b>				
Cold Turkey	13	9	1	23
Medication	2	1	0	3
Gum	2	2	0	4
Patch	4	3	1	8
Attended a support group	0	2	0	2
Physician support	1	0	0	1
Exercise and diet	0	1	0	1
<b>Reason for quit attempt</b>				
High cost of smoking	2	0	0	2
Physician telling me to stop smoking	1	2	0	3
Health reasons	3	2	1	6
Bad effects	1	0	0	1
Improve health	3	0	1	4
Did not want to smoke anymore	1	0	0	1
Pregnancy	0	1	0	1
Job	0	1	0	1
Stopping drugs	0	1	0	1
Tired of smoking	0	3	0	3

- Male Participant (TWC)

## Theme 2: Smoking Cessation Resources

Most participants perceived that smoking cessation resources are not available in the community.

*"I don't see in the community a lot of help to stop, you have to go somewhere for that."*

- Female Participant (TWC)

Participants reported that physician support was a key factor in quitting. In particular, conversations about how smoking is affecting one's health, being shown pictures of the health implications of smoking (eg, diseased lungs), and being offered prescriptions for patches/gum/medicine were described as beneficial. Participants agreed that there is enough educational material out there about smoking, and it is that people are making poor behavior choices.

*"At this point, right now they are just making the choice that you are going to smoke or you are not going to smoke. You can't blame it on not being knowledgeable- because we are knowledgeable."*

- Female Participant (BW)

Although some reported knowing where cessation resources could be found, others reported that they were not aware of how to access these resources.

*"Do they have it? I'm asking you. Do they have any? 'Cause I didn't know of any."*

- Male Participant (BW)

Furthermore, although participants indicated that they have access to information about the harmful effects of smoking, they also reported a lack of information about how to quit. The participants expressed interest in learning about the different quitting approaches available.

*"...Okay if you do smoke, this is and this is gonna happen to you. They've got so much plethora of information about that. But what kind of information do they have, is, you can say, instead of smoking, you can go do this, you can go and do this activity, you can go to this social versus just taking a patch, or some type of medication. So, I think they inform us in the community but they don't give us options to teach us ways to go about quitting this habit."*

- Female Participant (TWC)

### Theme 3: Legal Mandates

Brewster Homes residents were fully aware of the no smoking policy, stating that they received information in the mail. However, several chose to continue smoking in their units. Some were concerned about enforcement, afraid of being evicted, and others believed the housing personnel are not enforcing the policy.

"I'll be honest, I smoke in my unit. But I do not smoke in [the community building]. Because there are places that you know where you can and cannot smoke at. Period. Because housing is on your head. So people here already know what they have to do in order to maintain that particular thing. And the smoking policy to me was wrong, 'cause you based that smoking policy on all of housing, but it was designed for senior building because they were setting it on fire with cigarettes..."

- Female Participant (BW)

Participants discussed the impact of legal non-smoking mandates in public places such as restaurants. Several shared that eating is a smoking trigger, and some participants shared that they smoke before entering restaurants. Some participants also noted that they have found ways around mandates in hotels, such as putting wet towels under doors and turning on showers to suppress the smell of cigarettes.

"No, [legal mandates] just make people more clever, and more conniving, and more sneaky to be able to get it under the radar. And I'm just being honest, as a smoker, I've seen people come up with different gadgets, and different methods on how to beat the system and break the rules. Turn on the ventilators and put the wet towels on the bottom of this, and you can smoke in a hotel room. Like, are you serious?"

- Female Participant (TWC)

Participants also discussed that an increasing number of businesses are not hiring smokers. Some said that this development has had a positive impact on their smoking as they are motivated to be hired and/or keep their job. However, one participant also commented that although there are increasing prohibitions against smoking, there are few resources attached to help smokers to quit.

"I am trying to figure out why did they make that rule [law] and then not prepare anybody to quit smoking?"

- Male Participant (BW)

### Theme 4: Education and Perceptions of Smoking

When asked if smoking is an addiction, most were aware that cigarettes have nicotine in them to make them want to smoke.

Participants did appear to be knowledgeable about the health risks of SHS. Some stated that SHS is almost as harmful as smoking. Several smoking participants admitted that they do not consider others around them as they light a cigarette. Some also reported that they have been asked to put out the cigarette or leave the house/car by the non-smokers around them.

"Lot of my friends, they don't allow smoking around them and you can't smoke in their house...You can't smoke in the house, you can't smoke in the car. You can't smoke. Just don't smoke when I'm around them. That's the kind of friends I be hanging around with."

- Male Participant (TWC)

Several participants noted that an individual's motivation to quit is among the most important factors with regard to cessation.

"But it's on you how you want to help yourself."

- Female Participant (TWC)

### Theme 5: Community Needs and Barriers

Participants noted needing more information about how to quit smoking. They expressed a desire to have a variety of techniques from which they may choose.

"...it's one thing that can educate us on why, once again, it's another thing to teach us techniques..."

- Female Participant (TWC)

"...It's not teaching you how to quit, it's just educating you on why you should quit. And that's what I'm frustrated with. Stop telling me why I should quit, everybody knows why we should quit, teach us how to quit."

- Female Participant (TWC)

Participants reported that seeing the physical impact of their smoking (eg, images showing diseased organs) have impacted their desire to quit. Some noted that seeing pictures was more impactful than just a discussion with a physician alone. Some participants also indicated their belief that if more smokers could see these types of pictures, more of them would choose to quit.

"...my suggestion...a picture was shown of the lungs, I have a picture on my camera, the lungs, would show a black lung and a healthy lung. If they see the picture, and let them know what

*they're doing to their lungs, if they constantly see that it would be reinforced, that picture let them see it can do a lot...."*

- Female Participant (TWC)

Overwhelmingly, participants expressed the need for support groups that were easily accessible. Brewster Homes residents, for example, indicated that they would like a support group that operates on the property. Residents pointed to the fact that current residents are already familiar with each other, and thus social support networks are already in place. However, they noted lack of stop smoking education and tools.

*"Participant: Several of the residents, different other people from different organizations coming in that maybe you have, ...can make me stop smoking? She may say something to inspire me, you never know 'til you get together."*

*Moderator: You are talking about a support group of peers, people that...*

*Participant: Yeah, live within the complex. Because a person that does not live in this complex can't hardly tell me why not to smoke when you don't live here."*

- Female Participant (BW)

Participants at both sites also expressed interest in community-based facilities that would provide stop smoking resources. Participants note that having access to medication and peers who are similarly quitting smoking in one location that is readily accessible would be a valuable resource.

*"Like let's say, if you want to try the medicine. Have a way for you to get a hold of the medicine. Or if you want to try the patch, have the patches available."*

- Male Participant (TWC)

## Theme 6: Medical Experiences

Some participants reported that recent changes to the healthcare system had negatively impacted service. Some also noted that the healthcare system is difficult to navigate when it comes to smoking cessation such as not finding a primary care physician that works for them or being prescribed smoking cessation aids. Some expressed that it would be helpful if a community health worker or patient navigator could help and serve as a liaison between the patient and provider.

*"You putting what you call, a professional in charge to get the non-professional started. That's the start right there."*

- Male Participant (TWC)

A good physician-patient relationship was important to the participants. Participants reported that they want to feel comfortable with and trust their physician. They also noted

wanting their physician to be accessible. The most compelling testimonies about the patient-physician relationship came from individuals who reported advocating for themselves; these individuals noted that they were able to create a patient-centered treatment plan with their physician.

*"I ask all kinds of questions, I ask all questions, one time she told me I ask too many questions and I said there ain't never too many questions."*

- Female Participant (BW)

*"...I knew I wanted to keep her as my doctor because she isn't explaining things to me and telling me what she thinks I should know as far as my health then she is asking me what do I go through so she can give me information."*

- Female Participant (BW)

## Discussion

This study is one of the first focus group investigations of the impact of smoking bans among smoking and non-smoking individuals living in US public housing. The ban specifically states that *"each public housing agency (PHA) administering public housing [is] to implement a smoke-free policy. Specifically, ... each PHA must implement a 'smoke-free' policy banning the use of prohibited tobacco products in all public housing living units, indoor common areas in public housing, and in PHA administrative office buildings. The smoke-free policy must also extend to all outdoor areas up to 25 feet from the public housing and administrative office buildings. This rule improves indoor air quality in the housing; benefits the health of public housing residents, visitors, and PHA staff; reduces the risk of catastrophic fires; and lowers overall maintenance costs."*<sup>15</sup>

Participants in our study revealed various ways smoking bans have affected their lives. Some noted a desire to quit smoking but indicated limited use (and knowledge) of existing cessation aids, and a lack of resources and education around smoking cessation. Participants were aware of smoking restrictions in public housing, but several reported that they continue to find ways to smoke in their housing units. Participants suggested to improve smoking cessation rates, resources including support groups, graphic images of smoking-related diseased tissue, and improved communication with health care providers around cessation would be useful. However, participants reported barriers to smoking cessation including lack of access to medications, social triggers to smoke, and socioeconomic stressors.

Health implications of cigarette smoking are higher among individuals reliant on public housing. Several participants indicated that they had illnesses that are caused or exacerbated by smoking, such as COPD, hypertension and asthma, which remain consistent with these previous findings. Some also expressed a sense of hopelessness concerning repairing



smoking-related health problems, noting that the “damage is already done.” Nevertheless, some participants noted health concerns as an important motivator for quitting smoking. Thus, it is important to reduce barriers to healthcare, to ensure equitable treatment of smokers in public housing, and to provide appropriate education around the benefits of smoking cessation for reducing the burden of chronic conditions.

Our participants reported being aware of smoking bans in public housing but some noted that they found ways to circumvent the ban when it comes to smoking in their own apartments. They also noted that they had to plan when and where they smoked, and that public areas are off-limits to smoking.

Our findings are consistent with those of other studies<sup>16</sup> that have demonstrated mixed support of smoke-free policies in subsidized housing, with a majority of non-smokers and minority of smokers supporting smoking bans inside residential units but less support for outdoor smoking bans.<sup>17</sup> Research has also revealed that approval of smoking bans by smokers may increase over time if outdoor smoking areas are utilized.<sup>13,22</sup> Support for a smoke-free policy increased by 19% within several months following the implementation of a policy allowing outdoor smoking, with the largest increase occurring among current smokers.<sup>22</sup> Designated outdoor smoking areas may therefore enhance resident compliance with indoor smoke-free policies.<sup>13</sup> Thus, it is unlikely that smoking has been eliminated in public housing but has been limited in spite of prohibitions enacted by U.S. Department of Housing and Urban Development (HUD).<sup>15</sup>

As reported by the participants in our study and others,<sup>16</sup> there are significant economic and logistical barriers to obtaining smoking cessation support and treatment. Participants in our study reported barriers related to information about quitting, medication access and psychosocial support, and even access to primary care services for smoking. These reports are consistent with findings that lower SES individuals have some knowledge of smoking cessation resources with greater barriers to obtaining effective smoking cessation support than do higher income individuals. People with lower household incomes frequently have poor health insurance coverage and lack access to PCPs.<sup>11</sup> Current smoking rates among those who are uninsured or who have public health insurance are twice that of those with private insurance.<sup>10</sup> Further, vulnerable populations report several unique smoking cessation barriers including high smoking acceptability rates, high psychosocial stress, insufficient mental health services and limited access to smoking cessation tools.<sup>6,21</sup> Although 54% of the tenants were in favor of prohibiting smoking inside units, support varied significantly based on smoking status with 72% of non-smokers and 36% of smokers endorsing these policies. Outdoor smoke-free policies were supported by 36% of residents, of which only 46% of non-smokers and 25% of smokers were in favor.<sup>17</sup> These factors place individuals in public housing at higher risk for smoking-related morbidity and mortality.<sup>23</sup>

Although this study provides a rich narrative regarding the impact of smoking bans on individuals living within public housing, these findings should also be considered within the context of the study limitations. This study was conducted at two facilities in a single city with a predominantly African-American population and the majority of the participants were female. One was a public housing complex and the other was a multidisciplinary center with public/transitional housing residents. Thus, these findings may not generalize to public housing in other cities, rural areas, or other countries. Although the data were collected in focus groups rather than individual qualitative interviews, it is possible that some group members may have influenced the opinions of others, or that some individuals may have felt reluctant to provide candid responses via implicit bias. Lastly, data were not collected regarding the various forms of smoking (cigarettes, cigars, electronic cigarettes, smokeless tobacco products, hookah, etc.) which could have been helpful.

Despite these limitations, our qualitative findings demonstrate that smoking bans in public housing occur within a complex set of issues including burden of smoking-related health and barriers to care that are prolific among people living below or near poverty levels in the United States. These findings may help to further shape policy and the availability of smoking cessation resources among individuals in public housing.

## Conclusions

This study presents new insights into the barriers of public housing residents’ perspectives on smoking, resources for smoking cessation, and the impact of policy changes in an urban American city (Detroit, Michigan). Recently enacted smoking bans in US public/transitional housing complexes have been enacted in an attempt to reduce tobacco use and secondhand smoke exposure among these residents but as demonstrated by the opinions of the study participants, there is a significant disconnect between the implementation of new policies and the target population for which the new policies were intended to protect. As such, policymakers may want to consider early and greater input from the target population themselves in order to address barriers to implementation.

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## Authors’ contributions

BF, PJ, AK, BT, and PL were involved in study design and collection of data. BT, DL, CS, MF, CP, MT, PD were involved in data analysis and interpretation. BT, DL, CS, MF, CP, MT, PDL were major contributors to writing the manuscript. All authors read and approved the final manuscript.

## Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article. The authors BF, CS, MF, PJ, AK, BT, CP, and MT declare that they have no competing interests. DL is supported by NIMHHD (R01 MD011322-01A1), NIDA (R01 DA034537) and PDL is supported by NHLBI (R01 HL146059 and R01 HL127215), NIH Admin (U24 NS100680), MDHHS (CDC 1815 and1817); MHEF (R-1907-144972); Research Contracts: Pfizer, Novartis; Consulting: BMS, and Astra Zeneca

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## Ethics Approval

Prior to the event, each participant was provided with an information sheet that stated “By completing the CPMD [Community Provider Medical Dialogue], you are agreeing to participate in this project” and “Taking part in this CPMD is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates.” This study was submitted to the Wayne State University Institutional Review Board where they determined this project did not constitute human participant research according to the definition codified in the Common Rule at 45 CFR 46 and FDA regulations. As such, IRB approval was waived.

## Informed Consent

Nonetheless, all participants provided verbal consent prior to participation and these consents were recorded as part of the audio recordings.

## Data Availability

The dataset and transcripts used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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