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A Qualitative Study Exploring Facilitators and Barriers to Implementing Smoke-free Homes in Georgia

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ABSTRACT

Background: Georgia is a middle-income country with high male smoking rates and recently implemented public smoke-free policies. In contexts like Georgia, smoke-free homes (SFHs) can play crucial roles in reducing secondhand smoke exposure and use prevalence.
Objectives: This study examined barriers and facilitators to SFHs among Georgian adults.
Methods: In February-March 2024, focus groups were conducted separately with smoking and nonsmoking adults in 2 rural communities (n=25; Mage=42.92, 52.0% female, 48.0% married). Data were examined using thematic analysis.
Results: Smoking participants (n=13) were primarily (84.6%) male; nonsmoking participants (n=12) were primarily (91.7%) female. Despite 72.2% reporting complete SFH restrictions, several exceptions and implementation challenges were noted. Smoking was commonly allowed for certain people (e.g., guests) or rooms/spaces (e.g., kitchen, balcony). Salient challenges included prevalent male smoking, difficulty changing behavior (smoking in general and smoking in the home), noncompliance, and accommodating guests, older extended family members, and important traditions and celebrations. However, important SFH motives were the health of non-smokers, particularly children, and serving as good role models for children.
Conclusions: Effective SFH interventions for Georgian households must address specific characteristics (e.g., high male smoking rates, hospitality, accommodating important traditions) and may serve as models for other countries with similar characteristics.
Keywords: Secondhand smoke exposure; Smoke-free homes; Tobacco.

BACKGROUND

The tobacco epidemic has increased in low- and middle-income countries (LMICs), where >80% of the world's smokers reside.[1] Tobacco control is a global health priority, given the related morbidity, mortality, and economic burdens.[1] One important component is secondhand smoke exposure (SHSe), which causes ~600,000 premature deaths annually worldwide and disproportionately impacts women.[2] A priority tobacco control measure is implementing smoke-free policies, which reduce SHSe and promote cessation.[1] Unfortunately, only 25% of the world's population resides in countries with comprehensive smoke-free laws.[1]

Even comprehensive legislation typically does not cover private settings like homes.[2] The home is a primary source of SHSe in countries with and without national smoke-free laws.[2] A 2017 study of 28 European Union countries found that home-based SHSe contributed to 24,000 deaths (0.46% of total deaths); further, South-Eastern European Union countries (e.g., Romania, Hungary) showed the most tremendous burden.[3] Because evidence indicates that smoke-free legislation promotes private smoke-free settings,[4-8] promoting smoke-free homes (SFHs) may be particularly effective when capitalizing on a window of opportunity presented by recently implemented public smoke-free policies.

Interventions promoting SFHs can reduce SHSe.[9-12] Yet, relatively few studies have evaluated SFH programs outside the context of protecting young children from SHSe[13,14] or explicitly focused on LMICs.[15] Georgia is one middle-income country (a former Soviet Republic) that has a high male tobacco use prevalence (49.5%) but a lower rate among women (8.5%).[16] Georgia ratified the WHO FCTC in 2006 and 2017-2018 and adopted and implemented progressive tobacco control legislation including a comprehensive public smoke-free law. However, over half of Georgian adults report past-month SHSe and allow smoking in the home.[17]

Many studies have identified facilitators and barriers to creating an SFH. While facilitators of establishing SFHs include perceived harm of SHSe, especially to children's health, desire for cleaner homes, avoiding the smell of smoke, community norms for smoke-free places, and influences of non-smokers,[17-20] barriers include denial or poor knowledge of SHSe risk, misconceptions regarding SHSe reduction strategies, inconvenience of going outside, weather, and social gatherings.[13,17-22] There may be unique considerations for SFHs in Georgia, stemming from sociopolitical and/or cultural

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differences.[23] Thus, it is important to identify barriers and facilitators similar to those in other countries (e.g., US, Australia)[13,17-22] and those unique to Georgia. Prior research has shown that common SFH motives among Georgian adults included preventing the smell and protecting children and non-smokers. In contrast, common barriers were smokers' resistance and misconceptions about SHSe reduction strategies (e.g., opening windows and limiting smoking areas).[17,24]

While prior studies provide insights to guide Georgia-relevant intervention research, surveys precluded more in-depth discussions of facilitators and barriers and may have lacked assessment of crucial factors.[17] For example, given Georgia's sociopolitical history and the prominence of family in the Georgian culture,[25] intervention messages appealing to ideals of community, hospitality, and/or protecting youth warrant further exploration.

This study aimed to augment the current literature by qualitatively assessing the process, barriers, and facilitators to creating SFHs among smoking and nonsmoking adults in Georgia. The ultimate goal was to develop culturally relevant interventions for Georgia. The focus on Georgia is particularly timely given the recent implementation of Georgia's national smoke-free policy. It also helps inform SFH interventions for other LMICs with high male smoking prevalence.

METHODS

Procedures and participants

The Institutional Review Board of George Washington University approved this study. In January – February 2024, we conducted four focus groups in two rural communities in Georgia, with two focus groups among those reporting current cigarette smoking and two among those reporting no cigarette smoking. Focus groups are well-suited to exploring phenomena not previously well explored and are thus appropriate, given the lack of prior research on SFH restrictions in Georgia.[26,27]

Local public health centers and community leaders recruited eligible individuals (i.e., either reporting past-month smoking or reporting non-smoking status but living with someone who smokes and is Georgian-speaking). Participants were scheduled for a focus group based on their smoking status. Focus group discussions were conducted in conference rooms at the local public health center and administrative facilities in the two communities and followed the consolidated criteria for reporting qualitative research (COREQ).[28] Before the discussion, participants consented and completed a brief survey. Two research team members with experience in qualitative methodology moderated the focus groups, lasting ~90-120 minutes. Sessions were audio-recorded. Participants were compensated with small gifts (e.g., t-shirts, notebooks).

After the four focus groups, the research team determined that saturation had been reached (i.e., no new themes emerged), and recruitment was discontinued.[29] The focus groups had a range of sample sizes (n=6 to 9; median=6.25; overall, 39 participants).

Assessments

The research team developed the focus group discussion guide based on prior research and pilot tested through mock discussions among staff members.[19,30,31] It explored perceptions of SHSe (e.g., "In your community, how big of a health issue is SHSe inside the home?"), personal practices regarding smoking in homes (e.g., "What rules do you have about smoking in your home? Who in your household smokes? Are certain people allowed to smoke in your home? What specific times/instances is smoking allowed?"). Moreover, communication among household members regarding smoking in the home (e.g., "Are there ever any discussions about smoking in your home with household members?"). Participants were also asked to provide insights regarding strategies to promote SFHs.

Participants completed a brief questionnaire assessing age, sex, education level, monthly income, type of housing, relationship status, household members who currently smoke, children under age 18 in the home, rules regarding smoking in the home or in the car, and cigarette use.[32]

Data analysis

Research assistants transcribed and translated focus group recordings into English. The research team used an iterative process to develop a master coding structure. Using qualitative analysis software (Dedoose), transcripts were independently reviewed by two researchers trained in qualitative analyses who used inductive analysis to generate preliminary codes. Primary (i.e., major topics) and secondary codes (i.e., recurrent themes within topics) were defined in a codebook. Two of the four focus groups were dual-coded; after each of the dual-coded focus groups, the coders met to determine inter-rater reliability (>0.90) and resolve any discrepancies. Then, the final two focus groups were coded. Themes were then identified and agreed upon, and representative quotes were selected. Descriptive and bivariate analyses were used to characterize the sample overall and by smoking status.

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RESULTS

Participant characteristics

The sample was, on average, 42.92 years old (SD=12.03), 52.0% female, and 48.0% married (Tab.1).

TABLE 1. Sociodemographic and tobacco use-related characteristics among adult participants in Georgia (N=25), overall and by smoking status

Variables	Total N=25 (100%)	Participants who smoke n=13 (52.0%)	Participants who do not smoke n=12 (48.0%)	P-value
Sociodemographics*				
Age (mean, SD)	39.80 (15.15)	35.08 (16.62)	44.92 (12.03)	0.106
Female	13 (52.0)	2 (15.4)	11 (91.7)	**<0.001**
Education (<Bachelor's)	7 (28.0)	5 (38.5)	2 (16.7)	0.225
Income				0.072
Up to 300,000	10 (40.0)	3 (23.1)	7 (58.3)	-
More than 300,000	15 (60.0)	10 (76.9)	5 (41.7)	-
Housing type#				0.488
Single-family/detached	20 (87.0)	12 (92.3)	8 (80.0)	-
Duplex/townhouse	1 (4.3)	0 (0.0)	1 (10.0)	-
Apartment	2 (8.7)	1 (7.7)	1 (10.0)	-
Married (vs. other)	12 (48.0)	6 (46.2)	6 (50.0)	0.848
Other smokers in the home	19 (76.0)	13 (100.0)	6 (50.0)	**0.003**
Children in the home	12 (48.0)	7 (53.8)	5 (41.7)	0.543
Smoke-free home rules				0.523
No rules/restrictions	3 (12.0)	1 (7.7)	2 (16.7)	-
Partial restrictions	4 (16.0)	3 (23.1)	1 (8.3)	-
Complete restrictions	18 (72.0)	9 (69.2)	9 (75.0)	-
Smoke-free vehicle rules^				0.528
No rules/restrictions	11 (47.8)	4 (36.4)	7 (58.3)	-
Partial restrictions	4 (17.4)	2 (18.2)	2 (16.7)	--
Complete restrictions	8 (34.8)	5 (45.5)	3 (25.0)	

Explanations: *All n (%) except age (mean, SD). P-values from t-tests and ANOVA for continuous variables (i.e., age) and Chi-square tests for categorical variables. #n=2 reported other. ^n=2 do not own a vehicle. ǂ Scale of 1=not at all to 4=very.

Most lived in single-family/detached homes (87.0%) and had others who smoked in the home (76.0%), and 48.0% had children. The majority (72.2%) had complete SFH restrictions; nearly half (47.8%) had no rules about smoking in household vehicles. Participants who smoked were primarily (84.6%) male; those reporting nonsmoking status were primarily (91.7%) female.

Qualitative findings

Shown in Supplementary Table 1, major topics included the impact of SHSe in Georgia, the nature of SFH rules, how household members interact regarding SHSe and SFH rules, motives for having an SFH, challenges to implementing SFH rules, and strategies to promote SFHs.

Impact of SHSe in Georgia

Most participants emphasized that SHSe in Georgia was a big problem. One nonsmoking female said, "This is quite serious, especially if children are in the family. Under no circumstances should you bring it home." Similarly, one male who smoked said, "I think it is a problem for everyone. The problem is how it harms himself, and others do not like it to inhale the smoke."

The nature of SFH rules

Household members who smoke were often the male head of the household and extended family members. Various rules were reported. Highlighting the contrast between those with and without restrictions, one male who smoked reported, "All my friends smoke, and we smoke at home," while another said, "It is strictly forbidden at our place. Whoever comes knows it, any guest who may come. If it is summer, then friends and smokers prefer to sit outside. In winter, they go out to smoke. It is crystal clear." Similarly, one nonsmoking female said, "No one smokes at my place. All guests go outside."

Various exceptions were reported. Allowing certain people, like guests or older extended family members, was frequently reported. One male who smoked said, "You cannot tell a guest. We can tell each other if it is a friend, but you cannot tell a stranger not to smoke at home." Another said, "A guest needs to know the rules in the house. Without warning, he should get up and go outside to smoke. When I am a guest, I go out to smoke."

Similarly, a nonsmoking female indicated, "It is awkward asking guests to go out to smoke. Sometimes, they smoke inside without asking permission. If he asks, we tell him to go out." Almost all participants noted that smoking in the home when children were present was prohibited.

Another prominent theme regarding partial restrictions was limiting smoking to specific rooms or spaces. Several noted that smoking was allowed – or occurred – in the kitchen, living room, and other common areas. One male who smoked said, "If the kitchen is a gathering place, then they can smoke there, in places where people gather." Many reported that those who smoked did so near windows or on the balcony to help with ventilation, although this did not always prevent SHSe. One nonsmoking female said, "We have guests smoking by the window. My husband also smokes by the window. Most of it goes outside, but the smoke also comes inside." Another said, "My husband smokes on the balcony but is so close that half the smoke gets inside." Several also noted that, if homes did have restrictions, smoking often occurred in the yard or garage.

Another common theme was exceptions related to bad weather (i.e., cold). One male who smoked said, "Very rarely, when it is too cold, I may smoke in the kitchen. I open the window when everybody is asleep." A nonsmoking female said, "When the weather is nice, [husband] goes out. When it is cold, he gets lazy."

Interactions regarding SHSe or creating an SFH

Participants reported various experiences regarding how household members communicate about smoking and SHSe in the home. Many indicated that people often disregarded smoke-free rules; one male who smoked said, "It is useless with Georgians. They still smoke inside, and an uncomfortable smell stays when they leave." Non-smokers frequently commented on the challenges of discussing this with males in the household or with guests; one nonsmoking female said, "I

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want to talk about it, but it might cause trouble in the family, so I refrain." However, many commented that their current rules resulted from ongoing discussions with household members.

SUPPLEMENTRAY TABLE 1. Themes, subthemes, and representative quotes by country and smoking status

	Participants who smoke	Participants who do not smoke
The magnitude of the problem of secondhand smoke		
Big problem	• As far as I know, passive smoking is more harmful [than smoking]; • It is undoubtedly very harmful to health; • This is quite serious, especially if children are in the family. Under no circumstances should you bring it home; • Our community] is suitable for many people as a resort zone; the air is excellent, but some people, especially children, suffer respiratory failure. I used to blame the humid climate. However, one day, when my husband and I decided that we should no longer smoke at home, no matter which room we were in, that health problem reduced in children. I realized that I was making a huge mistake.	• When a family member smokes in the house, it is terrible, and secondhand smoke harms other family members; • I think it is a problem for everyone. Well, the problem is in a way that harms himself, and others do not like it either to inhale the smoke.
Who smokes in the home		
	• I smoke cigarettes, nothing else; • There are two of us smokers at home, and we never smoke inside; • I am the only smoker, and I go out…	• Kids did not know that their dad was a smoker; he would go out to smoke, and they were surprised once they saw him. We have a big family, and my grandmother smokes. In summer, she would go out with the kids. My small kid saw it and imitated her. He put a cigarette in his mouth, and I got angry. Mom and Dad do not smoke, and he imitates his grandmother.
Smoke-free home rules		
There are no rules; allowed everywhere	• All my friends smoke, and we smoke at home; • Almost everyone around me is a smoker, and I sometimes allow them to smoke at home. No one gets harmed because everyone smokes; • I am against smoking at home, but I live alone, and sometimes I smoke inside, sometimes outside.	
Complete ban	• Smoking is strictly forbidden at our place. Anyone who comes knows it, including guests. In summer, friends and smokers prefer to sit outside. In winter, they go out to smoke. It is crystal clear; • They do not smoke inside my house in any way. I have children at home, and they cannot smoke. I try not to smoke, either.	• Even if a guest comes, [husband] does not smoke at home. They do not smoke at home, and we will not let them either; • No one smokes at my place. All guests go outside. • If guests come to our house, they must go to the balcony. No one smokes in the house.
Partial restrictions		
Rules/exceptions for certain people	• I can smoke inside alone; • You cannot tell a guest. We can tell each other if it is a friend, but you cannot tell a stranger not to smoke at home; • When a guest arrives, it seems incorrect to tell him to go out to smoke; he smokes inside. To me, it is the biggest problem – a guest needs to know the rules in the house. Without warning, he should get up and go outside to smoke. When I am a guest, I go out to smoke.	• My husband smokes; he goes on the balcony. When there is a guest, they would go out in the entrance hall at the stairwell; • It is awkward to ask guests to go out to smoke. Sometimes, they smoke inside without asking permission. If he asks, we tell him to go out; • I cannot tell a guest to go out and smoke there.
Not allowed around children present	• Sure, if a child is at home, no smoking.	• It is partially prohibited because there are children in the house.
Allowed only in certain places	• When we are in another room without family members, I allow them to smoke in the room at home; • I have to have my space. My rights must also be protected. At home, I created a space where I could smoke. It should be that way everywhere; • If the kitchen is a gathering place, they can smoke where people gather; • In specific places with a window where the room can be aired.	• I have partially tamed him. He is too lazy to go outside, so he smokes in the toilet, and smoke enters the house; • We have guests smoking by the window, and my husband also smokes by the window. Most of the smoke goes outside, but it also comes inside.
Porches, patios, balconies, gardens, stairs, garages	• It is appropriate to smoke in the yard, but where there is a child, it is not desirable to smoke there; • They may not smoke in our house but can smoke in the garage.	• I have a private house. It is convenient to smoke. My husband smokes on the balcony but is so close that half the smoke gets inside…. • Nobody smokes at my place. If smokers come, they go on the balcony; • Guests, too, smoke in the yard.
Allowed when the weather is terrible	• Very rarely, when it is too cold, I may smoke in the kitchen. I open the window when everybody is asleep.	• In winter, yes ... right; • When the weather is nice, [husband] goes out. When it is cold, he gets lazy.
Discussions about smoking/SHS in the home or creating SFH		
Who initiates conversations	• I thought they should not stay in the room to smoke but go outside because children are running around. I suggested we go outside to smoke, and they reacted positively, so they went out.	• I ask him if he cannot quit, at least to try to smoke less; • I ask them, if they do not, that is probably their problem, but I ask: 'Could you please go outside to smoke and then come back?'

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TABLE 2. Themes, subthemes, and representative quotes by country and smoking status (continued)

	Participants who smoke	Participants who do not smoke
Discussions about smoking/SHS in the home or creating SFH (continued)		
Results of discussion		
Nothing	• We also have a guesthouse, and we warn everyone. However, it is useless with Georgians. They still smoke inside, and an uncomfortable smell remains when they leave.	
Arguments/tension		• We just had a conversation this morning. I want to talk about it, but it might cause trouble in the family, so I refrain.
Motives for creating an SFH		
Health of non-smokers	• We are responsible to our children and the elderly. I have an old mom, children, and wife, and I know that smoking is harmful. I think it is mainly for family members. For me, that is the reason: not to harm the health of my children and family members; • Most smokers know that they are harming people around them and go outside to smoke.	• When a family member smokes in the house, it is terrible, and secondhand smoke harms other family members.
Health of children	• There was a period when I smoked at home, and it affected my children's health, which I discovered later on; • I agree; we have to save future generations.	• In our case, when our third child was born, [husband] quit smoking inside. Before that, he would smoke inside. With a small child in the home, he changed.
Set a good example for children	• I have children: my boy is 14. I tell him, 'Do not smoke, do it this way, play that way.' He asks me to be an example and not smoke. 'You tell me what to do, so do it yourself.' I feel ashamed; • Even if I wanted to, I would not smoke at home. My children would be angry. There is no way I smoke at home.	• When grandchildren are at our place, [husband] smokes outside. Children help in that case, so he does not smoke inside the house; • If you do not respect yourself, you have to care about children, and he might restrain himself for kids.
Keep the house clean/smell	• I cannot tolerate the smell. Cigarette smoke has a different smell; • I wash curtains and brush everything. It is very harmful to health, and the smell…. That is very bad; • I am a smoker, but I would not say I like the unpleasant smell of places where people smoke. It is full of smell, all the more impressive for a non-smoker. Moreover, ashtrays full of cigarette butts are disgusting; • It is an unbearable smell. My children are already students and are not at home at all, and I could not harm anyone, but the smell is awful.	• The toilets are mainly terrible because there is smoke there. The worst thing is that I am allergic and cannot stand it; in the end, the smell comes out; • - Imagine the smoke mixed with food is terrible. After a dinner of 20 people, when I would come home, there was a terrible smell….
Sociopolitical facilitators		
Public smoke-free policies prompted smoke-free homes	• I think new regulations immensely helped closed spaces restaurants. Even though I am a smoker, I would not say I like the smell in spaces where smoking is allowed. Walls keep the smell; there is nothing that helps.	• In Georgia, when it got banned and fines started, they no longer smoke in gathering places.
Challenges to implementing a smoke-free home		
Smokers do not want rules or to quit smoking	• Almost every day: Why don't you quit? It is enough; you smoke too much, etc. I am used to it. I am trying, but so far, no success; • In our homes and families, I always go out to smoke wherever I go. We all do that way. We could not stop smoking, however.	• I had conversations about quitting tobacco with my mother-in-law, who smokes. We have an extraordinary relationship and have discussed this topic a lot. She has smoked since she was 15. Whatever information you bring, she does not quit. Health problems have been identified, and then we avoid talking so as not to cause trouble in the family. We discuss this topic all the time, but it does not work.
Smokers are likely to ignore the rules	• For some, no agreement matters. Some smoke in bed; nothing can help there.	• This problem is obvious. We have a ban, but they do not pay attention to it; • This is noticeable even in our building. When we enter our room next to those who smoke, there are bans, but they still smoke.
Culturally specific challenges	• A Georgian traditional feast does not go well with leaving, returning, smoking, or getting inside, so toasts are missed.	

Motives for creating an SFH

The most significant amount of discussion regarding motives for creating an SFH focused on the health of non-smokers, particularly children. One male who smoked noted, "It is a responsibility to our children and the elderly. I have an old mom, children, and wife, and I know it is harmful. I think it is mainly for family members. For me, that is the reason, not to harm the health of my children and family members." Many commented on the importance of setting a good example for their children. One male who smoked said, "In my family, I have children: my boy is 14. I tell him: 'Do not smoke, do it this way, play that way.' Moreover, he asks me to be an example, not to smoke."

Another salient theme was keeping the house clean and free of the smell of smoke. One male who smoked commented, "I am a smoker, but I do not like the unpleasant smell of places where people smoke. It is full of smell, all the more impressive for a non-smoker. Moreover, ashtrays full of cigarette butts are disgusting."

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Challenges to implementing an SFH

A critical set of challenges to implementing an SFH was related to general difficulties in changing behavior – including quitting smoking in general and quitting smoking in the home. One male who smoked noted, "Almost every day: why don't you quit, it is enough, you smoke too much, etc. I am used to it. I am trying, but so far, no success." Another said, "In our homes, families, wherever I go, I always go out to smoke. We all do that way. We could not stop smoking, though." Another commonly reported theme was that household members might/do ignore the rules; one nonsmoking female said, "This is noticeable even in our building. When we enter our room next to those who smoke, there are bans, but they still smoke." Finally, some commented on how having SFHs might impact Georgian traditions; one male who smoked said, "Georgian traditional feast does not go well with leaving-returning, smoking, getting inside, so that toasts are missed."

DISCUSSION

Findings indicate that despite increases in SFHs in Georgia in recent years – alongside the implementation of progressive smoke-free public policies – ongoing challenges must be addressed to optimize the window of opportunity afforded by recent tobacco control legislation. This legislation may accelerate shifts in social norms, which could promote greater confidence among individuals to implement and enforce their voluntary policies in private spaces,[33] which could, in turn, catalyze the effects of the national legislation.[33,34] This is particularly relevant, given that smoking among Georgian adults most frequently occurs in homes and cars,[35] where most SHSe occurs among children and non-smoking adults.[36]

Findings regarding facilitators and barriers to implementing an SFH are largely consistent with research exploring similar topics using qualitative approaches in other countries[13,19,20,30,37] and using survey-based methods in Georgia.[17,38] While the most salient motive for creating an SFH was to protect non-smokers, particularly children, notable challenges were the difficulties with changing behavior – both smoking in general and smoking in the home – as well as noncompliance with SFH rules. However, additional motives and challenges were more specific to the Georgian culture. For example, in Georgia, there is a central focus on family. Over half of Georgian households are multigenerational, as in many countries in this region.[39,40] Thus, children in the home may also be grandchildren, so managing the multigenerational aspect of smoking is important. There were also challenges related to hospitality and traditions, specifically that it was deemed inappropriate to ask guests to smoke outside and that SFHs could disrupt traditional Georgian feasts – or 'supras' – which are a significant part of Georgian social culture to celebrate specific events (e.g., weddings, birthdays, visitors) and involve long multicourse meals with multiple toasts.

Current findings have implications for research and practice. Research to develop interventions to promote SFHs in Georgia should emphasize the impact on non-smokers, particularly children, and engage them in both promoting SFHs and supporting household members who smoke. Additionally, interventions that appeal to men and empower women may enhance men's motivation to protect their families and buy-in to implementing SFH rules and build skills and confidence among women to navigate implementing and enforcing SFH rules effectively. Finally, such interventions must consider accommodating household members and guests who smoke, in general, and in the case of Georgia-relevant contexts, such as multigenerational households or guests or celebrations involving social interaction.

Limitations

Findings from this small sample in generally more rural communities in Georgia may not generalize to other Georgian adults. Selection bias may have also impacted generalizability of findings. Additionally, self-reported assessments limit the extent to which we can account for bias. Despite these limitations, findings are important given the limited research on voluntary SFH policies in Georgia and the identification of country-specific barriers that should be addressed.

CONCLUSIONS

Given the high male smoking prevalence in Georgia and the historical impact on SHSe among non-smokers and children, the recent implementation of progressive tobacco control policies marks a pivotal time to accelerate their impact on those who do and do not smoke. Developing effective, culturally relevant interventions to promote SFHs in Georgia is important to this strategy. Findings underscore the promise of current evidence-based interventions that could be adapted to address specific facilitators and challenges relevant to Georgian households. This work may inform SFH interventions in other countries that share characteristics of Georgia (e.g., high male smoking prevalence, family-oriented, recently-implemented smoke-free policies).

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REFERENCES

1. World Health Organization. WHO global report on trends in prevalence of tobacco use 2000–2030. https://www.who.int/publications/i/item/9789240088283. 2024.
2. World Health Organization. Tobacco free initiative. https://www.emro.who.int/tfi/quit-now/secondhand-smoke-impacts-health.html. 2024.
3. Carreras G, Lachi A, Cortini B. Burden of disease from second-hand tobacco smoke exposure at home among adults from European Union countries in 2017: an analysis using a review of recent meta-analyses. Prev Med. 2021/04/01/ 2021;145:106412. doi:https://doi.org/10.1016/j.ypmed.2020.106412
4. Monson E, Arsenault N. Effects of Enactment of Legislative (Public) Smoking Bans on Voluntary Home Smoking Restrictions: A Review. Nicotine Tob Res. Feb 2017;19(2):141-148. doi:10.1093/ntr/ntw171
5. Gallus S, Lugo A, Gorini G, Colombo P, Pacifici R, Fernandez E. Voluntary home smoking ban: prevalence, trend and determinants in Italy. Eur J Public Health. 2016;26(5):841-844.
6. Minardi V, Gorini G, Carreras G. Compliance with the smoking ban in Italy 8 years after its application. Int J Public Health. 2014;59:549-554.
7. Jarvis MJ, Sims M, Gilmore A, Mindell J. Impact of smoke-free legislation on children's exposure to secondhand smoke: cotinine data from the Health Survey for England. Tob Control. 2012;21(1):18-23.
8. Fernández E, Fu M, Pérez-Ríos M, Schiaffino A, Sureda X, López MJ. Changes in secondhand smoke exposure after smoke-free legislation (Spain, 2006–2011). Nicotine Tob Res. 2017;19(11):1390-1394.
9. Hovell MF, Zakarian JM, Matt GE. Counseling to reduce children's secondhand smoke exposure and help parents quit smoking: a controlled trial. Nicotine Tob Res. Dec 2009;11(12):1383-94. doi:10.1093/ntr/ntp148
10. Kegler MC, Bundy L, Haardorfer R. A minimal intervention to promote smoke-free homes among 2-1-1 callers: a randomized controlled trial. Am J Public Health. Mar 2015;105(3):530-7. doi:10.2105/AJPH.2014.302260
11. Mullen PD, Savas LS, Bundy LT. Minimal intervention delivered by 2-1-1 information and referral specialists promotes smoke-free homes among 2-1-1 callers: a Texas generalisation trial. Tob Control. Oct 2016;25(Suppl 1):i10-i18. doi:10.1136/tobaccocontrol-2016-053045
12. Williams RS, Stollings JH, Bundy L. A Minimal Intervention to Promote Smoke-Free Homes among 2-1-1 Callers: North Carolina Randomized Effectiveness Trial. PLoS One. 2016;11(11):e0165086. doi:10.1371/journal.pone.0165086
13. Stevenson L, Campbell S, Bohanna I, Gould GS, Robertson J, Clough AR. Establishing Smoke-Free Homes in the Indigenous Populations of Australia, New Zealand, Canada and the United States: A Systematic Literature Review. Int J Environ Res Public Health. Nov 14 2017;14(11)doi:10.3390/ijerph14111382
14. Johnston V, Walker N, Thomas DP. The study protocol for a randomized controlled trial of a family-centred tobacco control program about environmental tobacco smoke (ETS) to reduce respiratory illness in Indigenous infants. BMC Public Health. Mar 7 2010;10:114. doi:10.1186/1471-2458-10-114
15. Harutyunyan A, Movsisyan N, Petrosyan V, Petrosyan D, Stillman F. Reducing children's exposure to secondhand smoke at home: a randomized trial. Pediatrics. Dec 2013;132(6):1071-80. doi:10.1542/peds.2012-2351
16. Kakutia N. Tobacco use prevalence among the adult population in Georgia, 2020. National Center for Disease Control and Public Health: https://www.ncdc.ge/#/pages/file/fa339295-6e09-4139-9d89-2ed16a91fe82. 2020;
17. Berg CJ, Dekanosidze A, Hayrumyan V. Smoke-free home restrictions in Armenia and Georgia: motives, barriers, and secondhand smoke reduction behaviors. European Journal of Public Health. 2023;33(5):864–871.
18. Rees VW, Keske RR, Blaine K. Factors influencing adoption of and adherence to indoor smoking bans among health disparity communities. Am J Public Health. 2014;104(10):1928-1934.
19. Escoffery C, Kegler MC, Butler S. Formative research on creating smoke-free homes in rural communities. Health Educ Res. Feb 2009;24(1):76-86. doi:10.1093/her/cym095
20. Passey ME, Longman JM, Robinson J, Wiggers J, Jones LL. Smoke-free homes: what are the barriers, motivators and enablers? A qualitative systematic review and thematic synthesis. BMJ Open. 2016;6(3):e010260.
21. Kegler MC, Haardörfer R, Berg CJ. Challenges in enforcing home smoking rules in a low-income population: implications for measurement and intervention design. Nicotine Tob Res. 2016;18(5):976-981.
22. Savas LS, Mullen PD, Hovell MF. A qualitative study among Mexican Americans to understand factors influencing the adoption and enforcement of home smoking bans. Nicotine Tob Res. 2017;19(12):1465-1472.
23. World Atlas. The culture of Georgia: https://www.worldatlas.com/articles/the-culture-of-georgia.html. 2024;
24. Berg CJ, Smith SA, Bascombe TM, Maglakelidze N, Starua L, Topuridze M. Smoke-Free Public Policies and Voluntary Policies in Personal Settings in Tbilisi, Georgia: A Qualitative Study. Int J Environ Res Public Health. Feb 2016;13(2):156. doi:10.3390/ijerph13020156
25. Kumar S. The Armenian People and Armenian Culture. WorldAtlas 2019. Available online: https://www.worldatlas.com/articles/the-armenian-people-cultures-of-the-world.html. 2019.
26. Kitzinger J. Qualitative research. Introducing focus groups. Bmj. Jul 29 1995;311(7000):299-302. doi:10.1136/bmj.311.7000.299
27. Krueger RA. Focus groups: A practical guide for applied research. Sage publications; 2014.
28. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. Dec 2007;19(6):349-57. doi:10.1093/intqhc/mzm042
29. Glaser B, Strauss A. Discovery of grounded theory: Strategies for qualitative research. Routledge; 2017.
30. Kegler MC, Anderson K, Bundy LT. A Qualitative Study about Creating Smoke-free Home Rules in American Indian and Alaska Native Households. J Community Health. Aug 2019;44(4):684-693. doi:10.1007/s10900-019-00666-1
31. Anderson KM, Kegler MC, Bundy LT, Henderson P, Halfacre J, Escoffery C. Adaptation of a brief smoke-free homes intervention for American Indian and Alaska Native families. BMC Public Health. Jul 23 2019;19(1):981. doi:10.1186/s12889-019-7301-4
32. Global Adult Tobacco Survey Collaborative Group. Global Adult Tobacco Survey (GATS): Sample Design Manual. Atlanta, GA: Centers for Disease Control and Prevention. 2020.
33. Kaufman MR, Merritt AP, Rimbatmaja R, Cohen JE. 'Excuse me, sir. Please don't smoke here'. A qualitative study of social enforcement of smoke-free policies in Indonesia. Health Policy Plan. Oct 2015;30(8):995-1002. doi:10.1093/heapol/czu103
34. Currie LM, Clancy L. The road to smoke-free legislation in Ireland. Addiction. 2011;106(1):15-24.

ISSN (Online): 2720-8796 ISSN (Print): 2720-7994

35. Harutyunyan A, Hayrumyan V, Sargsyan Z. Smokers' and nonsmokers' experiences with and interactions to reduce secondhand smoke exposure in Armenia and Georgia. Tob Prev Cessat. 2021;7(6):doi: 10.18332/tpc/131059.
36. Centers for Disease Control. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Centers for Disease Control and Prevention (US); 2006.
37. Zheng P, Berg CJ, Kegler MC. Smoke-Free Homes and Home Exposure to Secondhand Smoke in Shanghai, China. Int J Environ Res Public Health. 2014;11(11):12015-12028.
38. Hayrumyan V, Harutyunyan A, Torosyan A. Tobacco-related risk perceptions, social influences and public smoke-free policies in relation to smoke-free home restrictions: findings from a baseline cross-sectional survey of Armenian and Georgian adults in a community randomised trial. BMJ Open. Feb 7 2022;12(2):e055396. doi:10.1136/bmjopen-2021-055396
39. ISET Policy Institute. The Multigenerational Country: https://iset-pi.ge/en/blog/427-the-multigenerational-country. 2014.
40. Hatfield J. Young adults in the U.S. are less likely than those in most of Europe to live in their parents' home. https://www.pewresearch.org/short-reads/2023/05/03/in-the-u-s-and-abroad-more-young-adults-are-living-with-their-parents/. 2023.

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