Title

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Journal

Family & Community Health, 44(3)

ISSN

0160-6379

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Publication Date

2021-07-01

DOI

10.1097/fch.0000000000000270

Peer reviewed

HHS Public Access

Author manuscript

Fam Community Health. Author manuscript; available in PMC 2022 January 01.

Keeping each other accountable: Social strategies for smoking cessation and Healthy Living in Vietnamese American men

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INTRODUCTION

Vietnamese American males have one of the highest smoking prevalence rates of any racial or ethnic minority.[1] The smoking rate among Vietnamese American males is 24.4%, compared to 17.3% of Non-Hispanic white males.[2,3] Vietnamese men with low English proficiency have an even higher smoking rate of 45%.[4,5] On the other hand, Vietnamese American women have much lower smoking prevalence rate (7.9%).[3] The disparities in smoking prevalence rates across ethnic groups have been attributed to social acceptability of men's smoking among peers, tobacco companies targeting certain racial and ethnic groups, and lack of intention to quit.[5–7] Smoking remains socially acceptable among many Vietnamese American men.[8,9] Recent research identified familial strains and communication challenges resulting from cigarette smoking in Vietnamese American families.[9]

Social support has been identified as important in the process of smoking cessation, however which mechanisms of social support enhance success in quitting remain unknown.[10,11] A recent review found that family-based smoking cessation interventions have yet to make a significant connection with social support theory and altering smoking behaviors.[12] Social support functions through emotional, instrumental, informational, and appraisal support.[13–15] Emotional support meets socio-emotional needs through the expression of empathy, love, encouragement, and belonging.[13,16–18] Instrumental support includes offering and/or

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supplying assistance materialized through tangible goods, aids, and services;[19] while informational support takes form through advice, suggestions, and information by others during times of stress, in order to problem solve.[20] Lastly, appraisal support is defined as support or information that is useful for self-evaluation or affirmation.[21] Support is defined in many ways; people may have preference for different types of aid depending on the situation, and researchers may choose which supports to use in interventions based on these circumstances.[22] Accountability, defined as an obligation or willingness to accept responsibility for one's actions or behaviors,[23] we argue is a key aspect of social support. While to our knowledge the concept of accountability as a mechanism in smoking cessation has not been explored in the smoking cessation literature, the recently developed Supportive Accountability model illustrates the role of support in increased adherence to interventions through a "trustworthy, benevolent" and expert coach-figure.[24] One study of a mental health intervention found that in addition to social support, programs should foster a culture in which participants are accountable for their peers, and "through mutual accountability garnered through stable and authentic relationships" an intervention's goals may be achieved.[24]

Many studies have identified how people make health behavior decisions using various theoretical models, including the health belief model, the theory of reasoned action, the theory of planned behavior, the transtheoretical model, and health action process approach.[25–29] Pasick and colleagues explored the meanings of the constructs theorized to affect health behaviors among ethnically diverse populations, and found that complex interpersonal connections and differing prioritization processes influenced by cultural, social, and historical factors affected many of the health decisions that people make.[30] This suggests that theoretical models limited to the measurement of cognitive processes might not accurately predict health decisions and behaviors, especially when they do not critically consider social status, level of education, and culture.

The importance of culturally appropriate strategies to invoke health behavior change has been well documented.[31–35] Previous targeted smoking cessation approaches, such as requiring smokers' initiation to cessation resources or visiting health providers, have not been shown to be effective for Vietnamese Americans.[7,36] Research suggests Vietnamese smokers are unlikely to seek smoking cessation help from physicians, since cultural values such as mental control and self-determination are important determinants of quitting.[37]

Witmer and colleagues suggested that interventions delivered by lay health workers (LHWs) or community health workers, provide social support through outreach and cultural linkages, and argued that community health workers are influential in information sharing, community empowerment and growth, and supporting underserved populations.[38] Furthermore, lay health worker interventions have shown to be effective in increasing breast, cervical, and colorectal cancer screening in Vietnamese Americans.[39–41] Preliminary evidence has also supported promising efficacy of the use of LHW outreach involving both smokers and their family members in promoting smoking cessation.[42] Lay health workers have also been used within community interventions for recruitment and social support. A qualitative study exploring the qualities of effective lay health workers found that being responsive, non-judgmental, approachable, having experiential knowledge, and cultural understanding were

essential in successfully connecting with the community of interest.[43] Evidence-based interventions that consider social context and address individual motivations may effectively change health behaviors, including tobacco use among Vietnamese American men.

This study explored the ways a lay health worker facilitated intervention integrated four social support mechanisms into two different study arms, tobacco cessation and healthy living. Each study arm (or intervention group) included paired family members and Vietnamese male smokers who participated in in-person LHW-led educational sessions in which either smoking cessation or healthy living information was shared, LHW follow up telephone counseling and encouragement of either smoking cessation or healthy living behaviors, and 6-month post intervention telephone survey assessment of current smoking status. In the following, we report findings from the qualitative phase of the randomized controlled trial (RCT) designed to assess this LHW-led family-based smoking cessation intervention in the Vietnamese population. The main purpose of this qualitative analysis is to understand how smokers, family members, and LHWs reported and experienced multiple social support mechanisms from an intervention delivered by a LHW with family participation, regardless of the intervention's topic (tobacco cessation or healthy living).

METHODS

Overview of Study

This randomized controlled study utilized lay health worker (LHW) outreach to recruit smokers and family member pairs (hereafter "dyads") to participate in "The Healthy Family Project." The desired outcome of the larger study was to evaluate the efficacy of a culturally appropriate family-based intervention using LHW outreach to promote smoking cessation among Vietnamese American men. A total of 107 dyads were enrolled in this two-arm trial, with 54 dyads assigned to receive a family-based smoking cessation intervention (Tobacco), and 53 dyads to receive education on health living that focused on nutrition and physical activity (Healthy Living). The educational content of the Healthy Living intervention arm, however, focused solely on encouragement of eating healthy food and engaging in physical activities without contents related to tobacco use or smoking cessation. Both intervention curricula were delivered by LHWs. The Tobacco group and Healthy Living group received the same number of intervention contacts on the same schedule and same format, which consisted of two LHW facilitated educational group sessions (4-5 weeks apart), 2 individual follow-up telephone calls two weeks after each group session, and a 6-month post intervention survey assessment.[44] The qualitative findings of this study were obtained through the analysis of the focus groups which were conducted with smokers, family members, family dyads, and LHWs from both intervention arms.

Study Setting

At the start of the study, the research team recruited and trained Vietnamese community members as LHWs. Eligibility for LHWs included (a) being 18 years or older, (b) self-identifying as Vietnamese, (c) speaking and reading Vietnamese fluently, and (d) no tobacco use in the past 12 months, (e) living and planning to stay in the Santa Clara County for 9 months to participate in training and to conduct recruitment and intervention, and (f) had

never received certification or licensure in the U.S. as a health professional. The LHW recruited the family dyads and served as the main point of contact for participants. Eligibility for smokers included (a) being an adult male, (b) being 18 years or older, (c) self-identifying as Vietnamese, Vietnamese American, or Vietnamese-Chinese, (d) speaking Vietnamese, and (e) living and planning to stay in Santa Clara County for 6 months post recruitment. Eligible smoking participants also had to have smoked at least 1 cigarette daily in the last 7 days. Eligible family members had to reside in the same household as the smoker and reported no smoking in the past 12 months.

Lay Health Workers utilized intervention materials tailored for each arm of the study to support smoker and family member participants.[42,44] Materials included: (1) Flip charts; (2) Healthy Family Action Plan; and (3) Smoking Cessation Resource information (only used in the Tobacco arm). LHWs used flip charts, made with self-standing laminated cardboard, to deliver the educational sessions. Flip charts were designed with bulleted speaking points on one side and text headline, brief explanatory text, and culturally appropriate graphics for the audience on the other side. Healthy Family Action Plans were given to each family dyad during the first meeting as a paper-based form that listed actions participants (smokers or family members) might take individually to support each other to move toward their health goals. For example, smokers in the Tobacco group may plan to call the Vietnamese language quitline during the week following the education session. Family members actions might include making smokers' favorite snacks to help with cravings. In the Healthy Living group, actions might include walking together more or reducing rice consumption. LHWs made two follow-up phone calls, each within 1 to 2 weeks after the education sessions to each participant to answer questions, review progress on the Healthy Family Action Plan and encourage participants to continue their participation. Smoking Cessation Resource information, given as handouts, contained information about the California Smokers Helpline (statewide free telephone quitline service) and a smoking cessation medication guide that provided information on types of medications, anticipated side effects and proper usage. Participants in the Tobacco group received the Smoking Cessation Resource information at the first group meeting, while Healthy Living participants received the information after the completion of the LHW educational portion of the intervention, following completion of a 6-month telephone survey assessment, which asked smokers about current smoking status and other behavioral changes.[44]

Focus groups were conducted approximately one month after smoker and family participants completed the telephone survey. We conducted focus groups to gain insight into smoker, family member, and LHW perspectives on the experience of participation in the study, including which aspects of the study may have impacted smokers' quit attempts. Focus group participants were selected through convenience sampling[45] from both arms of the study—Tobacco and Healthy Living. Criteria considered in recruitment included representation from different LHW sessions and differing smoking statuses at the time of the 6-month survey assessment. Research staff contacted 62 potential focus group participants by telephone (31 dyads from the Tobacco group and 31 from the Healthy Living group). Nine dyads from the Tobacco group and nine dyads from the Healthy Living group agreed to participate (29% participation rate). All 18 LHWs participated in focus groups (100% participation rate). In total, focus group participants consisted of 18 smokers, 18 family

members, and 18 LHWs (N=54). We conducted focus groups with tobacco group smokers only (n=6 participants), tobacco group family members only (n=6 participants), Healthy Living group smokers only (n=6 participants), and Healthy Living family member participants only (n=6 participants). Two focus groups consisted of three family dyads from the tobacco group (n=6 participants) and three family dyads from the Healthy Living group (n=6 participants). Lastly, in two separate groups LHWs from the tobacco group (n=9 participants) and Healthy Living group (n=9 participants) were asked about their experiences facilitating each intervention arm. Focus group questions were identical across intervention arms, and were conducted at community centers, homes of participants or LHWs, or community-based organization offices.

Data Analysis

Bilingual, bicultural research team members conducted focus groups in Vietnamese. Group discussions were digitally recorded, transcribed in Vietnamese and then translated into English for analysis. The research team utilized ATLAS.ti version 7 (Berlin, Germany) to facilitate and organize analysis. Analysis was informed by Grounded Theory[46] and included the development of both inductive and deductive codes. Deductive codes included participants' opinions on the most useful parts of the program, instances of changing smoking behaviors, healthy eating or physical activity, and suggestions to improve the program. Inductive codes were developed from new ideas or concepts that emerged from participant reported experiences. Throughout the coding process, team members met regularly to discuss codes and emergent themes. Once all codes were entered into ATLAS.ti, we conducted "queries" to evaluate the associations between specific codes and identified patterns in the data. These patterns became the themes reported in our findings.

RESULTS

Focus group participant demographics are detailed in Table 1. Smoker participants ages ranged from 40 to 77 years of age (average age = 62.3); 22% had less than high school education; all smokers, with the exception of one, were born in Vietnam and have lived in the U.S. for an average of 18 years. Smokers had limited English proficiency, reporting they mostly spoke English "so-so," poorly, or not at all. At the time of focus group participation (6 months post-intervention), 8 of the smokers had achieved at least 30 days of smoking abstinence, which was biochemically verified by salivary cotinine and independent corroboration from their family member participant. Family member participants ages ranged from 21 to 74 (average age = 56.3); all were female apart from one male family member. Of the 18 family member participants, 14 were spouses, one was a parent, one was a child, and two were another type of family members. Half had lower than high school education. All family member participants were born in Vietnam, have lived an average of 17 years in the U.S., and all spoke English "so-so," poorly, or not at all. LHWs had an average age of 55.7 years (median age = 58.5 years, range: 25 to 72 years). A majority of LHW had some college education, an associate's or bachelor's degree (83.3%), and 46.5% self-reported high spoken English proficiency. Among the 18 LHWs, one-third had prior experience as a lay health worker in other research studies.

Participants reported that both arms of the intervention were helpful, and smoking reduction was a direct result of the intervention's curricula. An overarching theme, pervasive throughout the narratives, was the idea of participant smokers' accountability toward LHWs, other families participating in the intervention, and their own family member. Additionally, many participants reported smoking reduction as a direct result of the intervention's curricula. In the following, we describe how the four aspects of social support: (a) emotional, (b) instrumental, (c) informational, and (d) appraisal were incorporated into and reinforced by the intervention using specific quotes from smokers or their family members.

Emotional Support

Emotional support is defined as having a sense of encouragement, love, empathy, and belonging from others, including feeling part of a group. During the focus group, participants were asked about their thoughts about family members participating in the intervention. One smoker responded, *"It's more helpful when a family member understands the struggle and supports me*" (Smoker from Tobacco Group). Similarly, another smoker responded, "*It's very helpful when I have someone giving me strong support*" (Smoker from Tobacco Group). Smokers reported that family members participation was helpful during the intervention, especially while the smokers are struggling to quit.

Smokers also reported that participating in the intervention with their family member was valuable. One smoker in the Tobacco group stated his wife's involvement was probably more helpful than if he had attended an intervention alone, since she helped reinforce what they learned.

> "*[Attending] the meetings with family members [was] more successful. Sometimes we forget if we just go by ourselves, but going together meant that once we were home my wife reminded me often and that was helpful. Regular reminders made me pay more attention. That helped me to cut down smoking, then quit. If [I were] by myself, I would just smoke [out of] habit.*" (Smoker from Tobacco Group)

Other family members described a different approach to cessation through patience and understanding. This wife understood that quitting was difficult for her husband, and learned strategies that she felt were more effective for their specific family dynamic.

> "*After taking the class together with my husband, we are now more understanding of each other. We both understand how nicotine addiction affects his health and I am more patient in supporting my husband. He has successfully quit for the past few months.*" (Family Member from Tobacco Group)

Additionally, a smoker in the Healthy Living group reported positive interactions of emotional support with their LHW, "*They supported, motivated, talked to me on the phone, and saw me outside to encourage me to eat healthy and stop smoking, so that everything will turn out to be good for me*" (Smoker from Healthy Living Group). Another smoker from the same focus group added his thoughts on the intervention:

> "*There is [this] meeting where everyone supported each other, there is the leader to encourage us and be genuine with us. It is very warm. That is what stands out the*

most, when the leaders during those meetings genuinely motivate us." (Smoker from Healthy Living Group)

In this case, the smoker recognized there were multiple people supporting him and other participants during the control group of the intervention.

Participants reported that emotional support was influential in discussions and behaviors around smoking. Family members and LHWs further assisted in intervention message reinforcement through emotional support and encouraged smoking cessation and healthy living in a loving and supportive way.

Instrumental Support

Instrumental support involves providing specific and concrete assistance. In addition to improved communication within families, participants reported that intervention materials (flip charts, Healthy Family Action Plans, and smoking cessation resource information) and content were useful in aiding with cessation and nutrition.

Families reported changes in communication strategies after participation in the program. For example, one family member discussed her interactions prior to involvement in the intervention. "*I had never talked with my husband about quitting smoking before; since I participated in this program, I talk to him, he listens to me and understands.*" (Family Member from Tobacco Group) Additionally, family members discussed strategies they learned from the program.

"*The workers were training us, showing the pictures, encouraging us to call the [quit]line or [go to] the doctor to hear the doctor's recommendation. They reminded us to try to encourage the family members to quit smoking*." (Family Member from Tobacco Group)

Participants were asked about which intervention materials and content were most helpful in the smokers' quit attempts. One family member responded, "*All sections are important. They are all related to each other.*" (Family Member from Tobacco Group) Other participants expressed agreement that these strategies and materials were helpful in aiding their smoker. "*After the meeting and explanation from the LHW, I went to see my family doctor and he prescribed nicotine gum, which I used after every meal.*" (Smoker from Tobacco Group) Through the intervention, the smoker recognized the importance of seeing a healthcare provider to help with his quit attempts.

A smoker from the Healthy Living Group highlighted the skills gained from the intervention, and how he applies it to his daily routine.

"*After participating in group sessions, I learned about my [Healthy Family Action Plan] and I really liked it, in terms of how much I could eat per day…after going to class and getting educated, I started to weigh out the percent of vegetables.*" (Smoker in Healthy Living Group)

Participants reported the intervention's benefits via instrumental support and the Healthy Family Action Plan as tangible ways to keep them accountable for their smoking and healthy living behaviors.

Informational Support

As noted above, both arms of the intervention provided informational support, and encouraged use of health resources. Only Tobacco group participants were provided with smoking cessation resources. Family members in the Tobacco group used the information provided in the educational sessions to convince previously recalcitrant smokers.

> "*After the sessions, I had a better understanding of tobacco. I knew that cigarette smoke causes cancer when inhaled but was completely surprised when I found out it can cling onto home furniture and affect children's health as well. With this information clearly provided by the program, my husband has no problem quitting smoking*." (Family Member from Tobacco Group)

Additionally, a family member in the Healthy Living group reported the change in health behaviors for her family members, as well as improved communication as a result of the program.

> "*Before this program, whenever I talked about nutrition, exercise, and smoking, my son never listened... However, after participating in this program, he read some books and talked to others about his health. He looked up how smoking affects his health as well as everyone else's in the family. He's been really good about nutrition and exercise too*." (Family Member from Healthy Living Group)

Participation in the Healthy Living curriculum resulted in improved communication in this family; the son took control of his health, used outside smoking cessation resources through information seeking strategies, and was more open to talking to others about smoking.

Additionally, within each intervention group, participants reported that the interactions they had with others in the program were valuable as they learned from each other's experiences. According to a family member in the Tobacco group, "*The most effective [parts of the intervention] were the two meetings to get to know other participants and partner up to support and remind each other.*" (Family Member from Tobacco Group)

Participants reported that having other family dyads participate with them was helpful since it explicitly contributed to active accountability throughout the duration of the intervention. For example, a smoker from the Tobacco group stated, "*Direct conversation with other participants was much more helpful for me than calling the [quitline].*" (Smoker from Tobacco Group) Smokers and their family members discussed the connections they made with other participants, and expressed preference for these relationships to other smoking cessation resources.

Appraisal support

Appraisal support was illustrated through all three of the intervention's sources of social support: LHW facilitation of the intervention, family members' participation, and family member reinforcement of the importance of changing health behaviors. The relationship participants had with LHWs seemed to influence participants' health behaviors in a positive way, whether they reduced or quit smoking or made dietary changes and increased their physical activity. It also seemed to influence the likelihood that they would follow through

with their Healthy Family Action Plan. As a Healthy Living group participant described, when discussing interactions with his LHW, "*[My LHW and I] would bump into each other and we would ask about how each of us is doing, she would ask about my learning experience, my participation in the class, my health.*" (Smoker from Healthy Living Group). The LHW's reminders of the goals set in the Healthy Family Action Plan gave the participant another opportunity outside the context of the class to think about his lifestyle and how it had changed since the start of the program. Although LHWs from the Healthy Living group did not discuss tobacco cessation strategies in the context of the educational sessions, this participant and his family member may have chosen 'smoking cessation' as one of the goals in their Healthy Family Action Plan. It also provided encouragement that there was someone interested in his health and kept track of his progress. Since LHWs are part of the community, spontaneous run-ins are likely to occur. LHW presence within the community provided steady, consistent social support.

Participants reported that their relationship with their LHW was rooted in respect; some participants referred to LHW as "my leader." LHWs indirectly and directly encouraged smokers and their family members to use what they learned from the program to improve their health.

When asked about their experience of the intervention, a smoker commented that, "*After the meetings I feel a lot more confident to quit smoking*" (Smoker from Tobacco Group). Another smoker in the same focus group agreed and added, "*With instructions from the LHW and group meetings, I'm more aware of my health and others around me so I decided to quit. I've been tobacco free for the past five and a half months*" (Smoker from Tobacco Group).

Family members discussed how talking with other family members was helpful in reinforcing smokers' goals:

> "*[Group members] are very friendly, even when we meet at the market, they always remind each other to quit and share their experience. For example, to call the [quitline] when they have a craving…*" (Family Member from Tobacco Group).

Tobacco Group participants reported applying what they learned about the harms of smoking to their lives and how it affected their family. Family members reinforced what they had learned from LHWs about the harms of smoking and helped put this information into perspective for smokers. Family members, particularly wives, highlighted the importance of health and familial roles, by encouraging smoking cessation.

> "*I participated in this program…I talked to my husband at home [saying], 'You must quit smoking! To protect your health... The thing is, you set an example for our children, health is the most important.' I talked a lot with him about the training class [LHW outreach education group]…now he tries, after dinner he takes one cigarette, and doesn't smoke at work.*" (Family Member from Tobacco Group)

Smokers from the Tobacco group reported family as the motivation for altering smoking habits. A smoker explained:

> "*My wife talked to me and told me that I'm the man of the family and I have to be responsible for my kids. I need to stay healthy in order to take care of them. That made me think a lot and I made up my mind to quit.*" (Smoker from Tobacco Group)

Interestingly, participants in the Healthy Living group reported the value of the curriculum in supporting smoking cessation attempts, despite the content focus on nutrition and exercise. Findings suggest both intervention arms motivated smokers to quit and modify their thinking about smoking. The smoker's detailed cigarette consumption illustrates his active surveillance of his changing smoking habits.

> "*After being in the classroom, I gained some experience and cut down a considerable amount of cigarettes. As of right now, I smoke 4 cigarettes per day. I also receive motivation from family. I have brothers and friends who advise me that I should stop smoking. But because of my habit, I cannot quit completely yet. Therefore, I will keep trying so that one day I can totally end it.*" (Smoker from Healthy Living Group)

As illustrated above, participants in both groups held each other accountable during the intervention through social interactions with the LHW, other family participants, and within their own family unit. The multiple iterations of support and encouragement became an essential part of helping smokers practice what they learned during the intervention. Smokers reported feeling more responsible for their health behaviors which they attributed to participation, and changes they made were reinforced by reminders and discussions with those keeping them accountable.

DISCUSSION

"The Healthy Family Project" utilized lay health worker outreach to involve smokers and their family members, as well as their peers to support smoking cessation and alter health behaviors for hard to reach populations. Focus group results illustrate that inclusion of social support mechanisms, including emotional, instrumental, informational, and appraisal support, were described by smokers as helping change their smoking behavior. Participants reported that accountability was an important mechanism, and was reinforced through family, peer, and LHW conversations and relationships, both during and outside of the intervention. Additionally, social support mechanisms initiated and enhanced within the intervention's design (i.e., the Healthy Family Action Plan), enabled smokers to feel accountable to their family members, which supported follow through with behavioral changes in smoking or lifestyle. Although Healthy Living group participants did not receive smoking cessation resources, some smoker and family member participants in this group reported seeking outside resources and identified smoking cessation as one of their goals in the Healthy Family Action Plan. Participants reported that the inclusion of family members reinforced smokers' understanding and application of the contents delivered during LHW-facilitated educational sessions. In their ethnographic study of mental health centers, Lewis and colleagues found that participants experienced accountability for and to their peers, and similarly concluded, "enhancing the capacity to support and relate to others may have positive synergistic effects."[47]

Westmaas and colleagues conducted a review of the connection between social support and smoking cessation in assisting smokers in their quit attempts.[10] Although the authors found no clear connection regarding the efficacy of smoking cessation interventions that incorporate social support, they suggest identifying and assessing (a) social support pathways, and (b) mediators and moderators of relationships to explore how social support is effective and who it affects. Several studies exploring Vietnamese men, family dynamics, and smoking cessation found that family members often did not feel comfortable addressing the smokers' cigarette use, did not want to disrupt family harmony, that conflicts arose due to smoking within households, and smokers often had no intention to quit.[9,48] Including LHWs as third-party facilitators of educational sessions and discussions around smoking and healthy living may make conversations regarding smoking cessation easier. We have previously reported on LHW processes,[42] including culturally specific strategies LHWs utilized to cultivate friendly and supportive environments and build trust among Vietnamese male smoker and family member participants. As previously noted, "education from a caring member of one's own community, delivered in a personal manner, is not reproducible or replaceable by any form of technology".[30] Smokers may have varying intentions and motivations to quit; thus, interventions that incorporate only one mechanism of social support may limit their reach to participants. Our study intervention, which incorporates four mechanisms of social support, may appeal to smokers with varying intentions and motivations to quit. This research illustrates the importance of multiple mechanisms of social support in smoking cessation interventions to target smokers at the individual, peer, and family level. Since our study focused on male Vietnamese American smokers with involvement of their non-smoking family members, the results may not be generalizable to other population groups, such as Vietnamese female smokers or smokers of other ethnic groups. Furthermore, our results also cannot be generalizable for individuals who do not have support from family members in their quit attempts. Nonetheless, given the high smoking prevalence among Vietnamese American males, the findings shed insights for increasing our understanding of how to leverage social support in engaging these smokers by involving them with their non-smoker family members and peers.

CONCLUSION

Smoking rates among Vietnamese American men with low English proficiency remain high. Previous smoking cessation interventions have not identified effective strategies to influence health behaviors in this hard-to-reach population. Focus group participants reported that "The Healthy Family Project" intervention's design of mobilizing social support through LHW recruitment and intervention facilitation, peer influence, and family member encouragement—and smoker's reciprocal accountability—was instrumental in altering smokers' reported tobacco use and follow through with planned action items that smokers and their family members identified in the Healthy Family Action Plan. Our findings illustrated the powerful impacts of various forms of social support on participants' engagement with activities related to smoking cessation.

Acknowledgements:

The author would also like to acknowledge Ching Wong, Alice Guan, Edgar Yu, and Long Nguyen for their contributions in study implementation and data collection. The authors wish to express their gratitude to the project lay health workers, the study participants, partnering agencies and their project coordinators, Anita Kearns at Vietnamese Voluntary Foundation - VIVO and Mai Pham at Immigrant Resettlement & Cultural Center – IRCC.

Funding: This research was supported by the Tobacco-Related Disease Research Program [22RT-0089H], and the National Institute on Drug Abuse [R01DA036749]. The authors have no conflicts of interest to disclose.

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Table 1:

Focus group participants characteristics, smoker, family member, and lay health worker (N=54)

	Smokers, *n* (%) or mean	**Family member, n (%) or mean**	**LHW, n (%) or mean**
Age Mean	62.3	56.3	55.7
Gender			
Male	18 (100%)	1 (5.6%)	7 (38.9%)
Female	0 (0%)	17 (94.4%)	11 (61.1%)
Education			
Less than high school	4 (22.2%)	9 (50.0%)	0 (0.0%)
High school	4 (22.2%)	4 (22.2%)	3 (16.7%)
Some college or beyond	10 (55.6%)	5 (27.8%)	15 (83.3%)
Average years in U.S.	17.9	17.0	
English proficiency			
Fluent/well	2 (11.1%)	0 (0%)	8 (44.5%)
Limited (so-so, poor, not at all)	16 (88.9%)	18 (100%)	10 (55.5%)
30-day smoking abstinence	8 (44%)	n/a	n/a
Total	18	18	18