

SHORT REPORT

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Culturally Tailored Smoking Cessation for Arab American Male Smokers in Community Settings: A Pilot Study

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Abstract: Tobacco use is a serious public health problem among Arab Americans with limited English proficiency. The main goal of this study was to develop a culturally-tailored and linguistically-sensitive Arabic-language smoking cessation program. A secondary goal was to evaluate the feasibility of recruiting Arab Americans through a faith-based community organization which serves as a neighborhood social center for the city of Richmond's Arab Americans. Eight first-generation Arab American men aged 20 years and above completed the three-month program. There was general agreement of the following: (1) each stage of the five-stage cessation program could be improved; (2) several glaring errors could be easily corrected; and (3) minor variation among the various countries-of-origin of participants could lead to a few changes in the program with respect to the use of some colloquial terms. The results suggest that it is possible to reach smokers from Arab American communities with a tailored Arabic language smoking cessation program. The findings of this report will be used as the basis for a large-scale intervention study of a culturally and linguistically sensitive cessation program for Arab American ethnic groups.

Keywords: Arab American, smoking cessation, community setting

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Background

The number of Virginians who claim an Arab ancestry more than doubled since the United States Census first measured ethnic origins in 1980 and is among the fastest growing Arab population in the country. It is estimated that the statewide population, adjusting for under-reporting, is close to 169,587. The largest number of new Arab immigrants to Virginia came from Egypt, Morocco, and Sudan. Arab Americans comprise roughly 0.58% of Virginia's total population.¹ The tobacco smoking prevalence rate among adult-Arab Americans range from 40.6% to 52%, which is two times higher than the national average rate.²⁻⁴ As such, Arab-Americans may contribute significantly to Virginia's tobacco smoking rate, which is already ranked twelfth among all 50 states.

Over the last fifteen years, studies have examined the prevalence and incidence of tobacco smoking and tailored cessation programs among key populations at risk.⁵ These have not, however, been conducted with Arab Americans. Additionally, differences in many racial/ethnic values and beliefs about tobacco use for adults in the United States have been identified,^{6,7} but not in the Arab American ethnic group. Therefore, few smoking behavior data regarding Arab Americans are available despite the fact that they number almost six million and are one of the fastest-growing immigrant groups, mainly due to war and political unrest in the Middle East. According to the 2010 census, Arab-Americans live throughout the United States and about one third of Arabs are concentrated in California, Michigan, and New York. Another third resides in Illinois, Maryland, Massachusetts, New Jersey, Ohio, Texas, and Virginia. Arab Americans have incomes that are higher than average, although incomes are below average in certain locations such as in Detroit and Anaheim.

Many Arab Americans come from countries where tobacco use is an important part of the culture and is a means to show hospitality and maturity.⁹ In the Middle East, health promotion, in terms of smoking health education and cessation, has only recently been introduced. A number of cultural elements distinguish this population, including a deep religious orientation, reliance on the extended family, defined gender roles and strong gender taboos, use of the Arabic language, lack of acculturation, and adherence to traditional beliefs and practices.

To our knowledge, few Arabic language and culturally sensitive smoking cessation programs exist for Arab Americans.^{10,11} Furthermore, many Arabs are unable to participate in traditional smoking health education and cessation programs as they do not speak fluent English.³ In order to create successful tobacco education programs in Virginia, it is essential to eliminate tobacco-related disparities and provide effective smoking health education and cessation programs for Arab Americans. As such, the main goal of this study is to develop a culturally-tailored and linguistically-sensitive Arabic language smoking cessation program. A secondary goal is to evaluate the feasibility of recruiting Arab Americans through a faith-based community organization which serves as a neighborhood social center for Richmond, Virginia's Arab Americans.

Methodology

After the Internal Review Board approval, all recruitment, data collection, and group meetings were conducted at the Islamic Center of Virginia, located in Richmond, Virginia. The Center has a main floor for activities, including many smaller activity rooms. The principle investigator (PI) posted advertisements on the Islamic Center's information board, and potential participants responded to the posted advertisements by replying to the listed phone number. Two weeks after the advertisements were first posted, 12 self-identified Arab Americans called the PI to inquire about the study.

Procedures

Stage 1: Preliminary telephone screening

The PI, who is a native Arabic speaker (ie, Arabic was her first language), is bilingual Arabic/English, and a smoking cessation expert, used the following inclusion criteria for recruiting over the preliminary phone call screening: (1) Arab American; (2) can read and speak Arabic; (3) 18 years of age or older; (4) not pregnant; (5) smoked at least 100 cigarettes during one's lifetime; (6) currently smoking at least five cigarettes a day on average; and (7) willing to set a date to quit smoking within a week of the enrollment. Exclusion criteria included the current use of nicotine replacement therapy (NRT) and/or the current use of other smoking cessation medications (eg, Chantix or Zyban). By the end of the preliminary screening, the



PI was able to recruit 11 of the 12 people who replied to the postings.

Stage 2: Face-to-face individual interview

Following the initial phone call screening, the PI, with the help of the Research Assistant (RA), who is also a native Arabic speaker, met each participant individually at the Islamic center general meeting room. During the individual face-to-face interviews, the 11 participants gave their written, informed consent and were then asked about their interest in quitting. Once participants expressed a desire to quit, the second step of the interview involved determining the “when” and “how” to quit. The “Five A’s” approach to encouraging clients to quit smoking was used. The Five A’s comprise (1) asking about tobacco use, (2) advising to quit, (3) assessing willingness to make a quit attempt, (4) assisting in a quit attempt, and (5) arranging follow up.

The next step was informing the participant that the study would take 12 weeks total with attendance required at six bi-monthly group intervention sessions during the following three-month period. The first nine weeks involved both the five-stage Arabic smoking cessation and counseling and the cultural and linguistic evaluation of the cessation workbooks. Booster/follow-up calls would occur during weeks 11, 10, and 12. Each participant was given an Arabic-language written guide about the study stages.

Stage 3: Implementing How to Quit Smoking in Arabic (HQSA) intervention protocol

The How to Quit Smoking in Arabic (HQSA) intervention protocol was designed on the basis of Transtheoretical Model (TTM) concepts.¹² According to this model, current smokers can be at the stage of pre-contemplation, contemplation, or preparation.¹³ Our cessation counseling program consisted of five parts (or stages), starting with people at the pre-contemplation stage of quitting smoking.

For each stage, the workbook contained key information and some homework, such as developing personalized strategies for dealing with high-risk situations and avoiding relapse and what to do if relapse should occur. The workbook also taught problem solving and relapse prevention skills (eg, recognizing and coping with cues that could precipitate relapse to tobacco use), provided skills training (eg, coping skills,

anger management, lifestyle changes, and relaxation techniques), as well as providing basic information about the harmful effects of tobacco, the benefits of quitting, and nicotine withdrawal symptoms. All problem solving and skills training was designed on the bases of Islamic and Arabic cultural values and assumptions, such as deep religious orientation, reliance on the extended family, defined gender roles and taboos, use of the Arabic language, and adherence to traditional beliefs and practices.

The following presents more detail about the HQSA five stages:

Stage One (Week 1): This stage is designed for smokers who do not yet feel ready to quit smoking. The focus in this stage is to help participants think about why they smoke and to prepare them to quit smoking. At the end of the week, participants were contacted by the RA to see if they were ready to quit smoking and advance to Stage Two. If participants decided they were not yet ready to quit smoking, they would not advance to Stage Two of the study, and their participation in the study would have been complete at this time.

Stage Two (Week 2): The information in Stage Two of the HQSA guide is geared for smokers who feel ready to quit smoking. The focus at this stage is a cost/benefit analysis of smoking and the obstacles that prevent participants from quitting. This stage included a one-hour group meeting, where participants had the opportunity to meet with the RA and other Stage Two participants and work together on the Stage Two guide materials. During the group meeting, participants were interviewed by the RA or the PI. Questions from the seven-day prevalence smoking abstinence form were used.

Stage Three (Week 3): During Stage Three, participants developed a plan to stop smoking. The material in the HQSA guide at this stage focuses on physical and mental preparation for smoking cessation, why it is important for participants to quit at this stage, how smoking hurts their health, and how family members and friends can help while they try to quit. During the one-hour group meeting, participants were interviewed by the RA or the PI. Information and questions from the two-week prevalence smoking abstinence form were used.

Stage Four (Weeks 4–5): This stage is designed for participants who quit smoking during Stage Three.



The focus during this stage was helping participants manage withdrawal symptoms and deal with smoking triggers. Participants were given a hotline number, enabling them to call the RA or PI at any time for support and to answer questions that the participants may have had. During the two weekly group meetings, participants were interviewed by the RA or the PI. Questions from the one-month prevalence smoking abstinence form were used.

Stage Five (Weeks 6–9): The final stage of the study was designed to help participants retain their smoke-free status. Participants received information on how to deal with cravings and how to continue living smoke-free in four weekly group meetings.

Booster/Follow-Up Phone Counseling: The RA and PI made follow-up calls during week 11 and at the three-month post-study completion to check in with participants, assess smoking status, and offer continued support in the way of encouragement, the provision of success stories, and communicating caring and concern.

Weekly group meeting/counseling protocol

The participants were told that group meetings were being carried out to obtain their thoughts about the workbooks provided. The PI conducted all meetings, each lasting approximately 50 minutes. Notes were taken by the RA at all meetings instead of audiotaping. Also in line with the TTM stage of change, the PI provided stage-matched information for those who desired to move to the next stage.

Measures and instruments

Each participant completed the following assessment questionnaire. All tools and measures were translated to Arabic and used in a previous study by the PI.^{3,14}

1. **Tobacco Use Questionnaire**—This 15-item questionnaire asks about smoking history, smokeless tobacco use, smoking habits, past attempts to quit smoking, and the desire to quit. This questionnaire was used once at the Stage Two face-to-face interview. The questionnaire was previously used by Haddad et al.,³ where it showed a high level of validity and reliability.²⁹
2. **The Test of Readiness to Change**—This likert format response tool has been designed on the basis of the TTM of Behavioral Change¹³

assumptions. The test of readiness to change used in this study consists of four questions, making it possible to identify the person at the stage of precontemplation, contemplation, preparation, and action (ie, the act of smoking cessation).¹⁴ This test showed a high level of validity and reliability.¹⁴ It was used at the Stage Two face-to-face interview.

3. **Modified Fagerstorm Test for Tobacco Nicotine Dependence (FTND)**¹⁵—This is an eight-item measure that determines the level of nicotine dependency or addiction. It asks how soon tobacco use begins each day, which cigarettes during the day a person could do without, how smokers cope in places where they cannot smoke, and how much and how deeply they smoke. The FTND was used at the Stage Two face-to-face meeting.
4. **Cultural and linguistic validity of the workbooks**—This is a two item instrument. Item one asked about the Arabic linguistics and dialects on a 4-point scale. The second item was an open-ended question that asked for written suggestions pertaining to Arabic culture dimensions and practices. This instrument was used at the end of each of the five stages.
5. **Participant perception of the intervention**—The purpose of this instrument was to evaluate whether or not participants experienced the activities described in the HQSA intervention protocols. Using a semi-structured instrument, the PI asked participants at the end of their group meetings to describe and rate the different problem-solving activities of their workbooks.
6. **Smoking cessation and reduction**—This was used as a measure of smoking cessation and reduction. Participants were asked whether they had smoked or had a puff on a cigarette and the number of cigarettes smoked in the past week. Participants self-reported the number of cigarettes smoked at one week, two week, one month, and three-month intervals.

Results

Smoking cessation and reduction

Out of 11 participants, eight decided they were ready to stop smoking and moved from Stage One, subsequently completing all five stages. The eight were



first-generation American men, all of whom were at least 20 years of age. Six participants were originally from Iraq while the other two were from Jordan. All participants were blue-collar workers and immigrated to the US in the last five years. We were not able to recruit women for two reasons: smoking prevalence rates among Arab women are very low compared to the men^{3,15} and Arabic culture discourages women from participating in such events.

At the beginning of the program, the participants were smoking an average of 20 cigarettes per day (SD = 8) and had been smoking for an average of 20 years (SD = 6). Nicotine dependency was moderate with a mean score of 5 (SD = 2.5). All eight participants participated in the five stages cessation program, and six of them participated in all group meetings at the Islamic Center of Virginia. The eight participants were at the contemplation stage at the beginning of the intervention while six of them moved from the contemplation to the action stage by the end of the cessation program; no participants were in the maintenance stage as none of them were followed up with beyond three months. Table 1 shows the rate of smoking reduction and cessation.

Cultural and linguistic validity of the workbooks

Six group meetings were held over a period of three months in the spring of 2010, and they ranged in size from five to eight participants. Each meeting was facilitated by the PI and lasted about 60 minutes. Light refreshments were served, and participants were not compensated for their time and effort. The following is a summary of the participant comments to the open-ended question regarding the cultural validity of the workbooks:

Table 1. Smoking reduction and cessation rates.

	Smoking cessation rates (n)	Reduction of cigarettes smoked over the past 7 days n (%)
Time point		
Baseline	0	1 (20%)
1 week	0	1 (20%)
2 weeks	1 participant	2 (40%)
1 month	2 participants	8 (45%)
3 months	2 participants	8 (45%)

Participant 1 comment: “I had been working on my decision to stop, you can say I did not dread the stop because if it turned out to be too hard, I would start smoking again. I looked to the workbook and I feel you did not consider reading the Quran as a way of reducing our craving.”

Participant 2 and 3 comments: “Also, I have noticed that you guys did not include the phrase ‘In Sha’allah’” [if god wills it]; this common Arab phrase asserts the absolute dependence of humankind on the beneficence of a higher power].

Participant 4 comment: “I did try to stop many times before, but I threw my tobacco into the garbage. Now I’ve stopped! Some minutes later I panicked and ran to the nearest gas station and bought a pack of tobacco. This feeling, I can still feel it, the panic. However after I smoke a cigarette, I went back to the booklet and found some techniques that can help me so I will not reach the stage of panic.”

Participant 5 comment: “I like your program. I wish you gave us some nicotine gum or nicotine patches. I also have some difficulty of quitting during the holy month of fasting, Ramadan. Maybe you can have a special program for that.”

Participants 6 and 7: “Good work.”

Participant 8: “It’s hard to write in a journal about our daily activities that hinder smoking. You know we Arabs do not like writing in a journal.”

In summary, there was general agreement among the eight participants of the following: (1) all of the five stages workbooks versions could be improved; (2) there were several glaring errors; (3) although there was some minor variation among the participants from different countries-of origin on a few colloquial terms (such as Waqfat vs. Batalet for quitting), there was agreement on commonly-understood and clear Arabic terms; and (4) the intervention does not currently have elements that tap into the Arab-Muslim religious practices of having designated prayer time during the day and reading the Quran. These behaviors can be important withdrawal symptom relieving and management techniques in the Islamic world.

Participant perception of the HQSA intervention

There was general agreement among the eight participants about the following: (1) the stage 4 and



5 workbook problem solving activities were not feasible for Arab American men; (2) the program did not provide them with NRT to help with their craving; (3) the intervention did not counter their family and friends' encouragement of group smoking, which is part of Arab cultural norms; and (4) there was no intervention regarding water pipe smoking.

Discussion

The preliminary results suggest that it might be possible to reach smokers from Arab American communities with a tailored Arabic-language smoking cessation program. We developed a culturally sensitive cessation and counseling tool in the Arabic language. We also printed a manual for the instructional resources. After collecting all participants' feedback, the HQSA was revised and evaluated to make the necessary changes and evaluations. Implementation and evaluation of its effectiveness are ongoing.

Another achievement was the community engagement and rapport between the Virginia Commonwealth University School of Nursing and the Virginia Islamic Center. The Islamic Center director was enthusiastic that we were able to try the cessation at the Center and provided support for further utilization of their center to serve the Arab American community living in Richmond, Virginia.

In retrospect, some aspects of the procedures and protocols could have been enhanced. For example, the participants asked us for any Virginia tobacco quit hotline line help materials and access at group meetings which were not readily available at meeting times. Also, problem-solving techniques to counter the pressures of family and friends within the Arab American culture was lacking in the HQSA intervention. Finally, interventions to assist in quitting water pipe smoking need to be added to any future HQSA intervention.

Limitations

Our pilot study had a number of limitations. First, the generalizability of the findings is potentially limited because a small sample of convenience was used. A second limitation was that a self-report reduction and cessation instrument was used without any biological validation. This may have resulted in recall bias and inaccurate reporting. Third, there was no randomized control group employed, so

we do not know if any improvement was due to selection or time or other threat to internal validity. Finally, there was no long-term follow-up involved, so we do not know about participants' quit rates over time.

Conclusion

The results suggest that it is possible to reach smokers from Arab American communities and tailor an Arabic language smoking cessation and counseling intervention. Further research, on a larger and quantitative scale, will be required to fully explore the validity of the HQSA cessation package.

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Author Contributions

LH conceived and designed the study, analyzed the data, and wrote the first draft of the manuscript. JC contributed to the writing of the manuscript. All authors reviewed and approved of the final manuscript.

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Competing Interests

Author(s) disclose no potential conflicts of interest.

Disclosures and Ethics

As a requirement of publication the authors have provided signed confirmation of their compliance with ethical and legal obligations including but not limited to compliance with ICMJE authorship and competing interests guidelines, that the article is neither under consideration for publication nor published elsewhere, of their compliance with legal and ethical guidelines concerning human and animal research participants (if applicable), and that permission has been obtained for reproduction of any copyrighted material. This article was subject to blind, independent, expert peer review. The reviewers reported no competing interests.



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