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Latino Adults' Perspectives on Treating Tobacco Use via Social Media

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Abstract

Background: Latinos are the largest minority group in the US and in California they outnumber non-Hispanic whites. Smoking cessation programs tailored for Latino culture and specific smoking patterns are needed. Online social networks for smoking cessation have high potential for Latinos but have not been tested.

Objective: Building a research program on social media applications for cancer prevention in diverse populations, this qualitative study assessed acceptability of tobacco treatment distributed via social media for Latino smokers.

Methods: We conducted three focus groups with Latino adult former and current smokers recruited from Santa Clara County, California in 2015 (N=32). We assessed participants' smoking histories, quit attempts, social media exposure, and receptivity to a social media-based smoking cessation intervention. Audio-transcripts were translated and coded for themes.

Results: Participants reported factors driving their tobacco use and quit motivations and emphasized the importance of community and family in influencing their smoking initiation, cravings and triggers, quit attempts and abstinence. Participants valued the communal aspect of social media and suggested strategically tailoring groups based on key features (e.g., age, gender, language preference). Participants reported preferring visual, educational, and motivational messages connected with existing services.

Conclusions: Participants generally voiced acceptability of a social media-delivered quit smoking intervention, viewed as well-equipped for catering to the strong community orientation of Latinos and able to address variation within the population through strategic group creation. As a group member reflected, "Podemos hacerlo juntos" (We can do it together).

Introduction

Tobacco is the leading preventable cause of death, linked to a dozen types of cancer and heart and lung disease.[1] Traditional quit smoking programs remain underutilized, particularly among racial and ethnic minorities such as Latinos.[2] Latinos are the largest racial/ethnic minority in the US and in some areas, such as California, Latinos outnumber non-Hispanic Whites (15.19 mil vs. 14.88 mil).[3] Latino smokers tend to smoke fewer cigarettes than non-Hispanic white smokers and are less likely to be daily smokers than smokers of all other racial/ethnic groups; hence, cessation pharmacotherapy may not be indicated.[4] Furthermore, research indicates light and intermittent Latino smokers are infrequently advised to quit by healthcare professionals.[5] Among Latino smokers surveyed at a community health fair, only 5% reported ever use of cessation medications, and less than 6% were aware of smoking quit-lines.[6] Yet, surveys of light and intermittent Latino smokers have indicated high readiness to quit and interest in smoking cessation programs.[7] Given light and intermittent smoking patterns and low penetrance of existing smoking cessation programs, innovative behavioral or psychological approaches are needed for the large population of Latinos in the US.

Tailoring of cessation treatment strategies to target audiences has been a strategy for increasing reach and engagement. In the early 1990s, a printed Spanish-language cessation guide was found to support quitting and was distributed as a best practice.[8] A 2003 review of the research literature, identified 10 published tobacco treatment studies targeted to Latino smokers, some with video and audio enhancements.[9] The authors concluded that greater innovations were needed to leverage state-of-the-art practices for treating tobacco in ethnic minorities and with a focus on Latino smokers. A 2011 review identified an additional 5 tobacco treatment studies focused on Latino smokers; added to Spanish language print materials were home visits with lay health advisors, telephone counseling, and group sessions.[10] Findings generally indicated the treatments increased abstinence at least in the short-term. The need for more research, with a particular focus on Latino smokers was underscored. Herein, we sought

to explore whether cessation treatment could be acceptably delivered via virtual support groups on mobile devices.

Online social media sites allow real-time interactivity and peer-to-peer support, which may build upon cultural norms and values, with potential low-cost application for disseminating health interventions to diverse groups. Further, communications generated and catalogued on social media sites provide novel information for better understanding transitions in smoking and emerging product use (e.g., e-cigarettes). Twitter is the dominant open social media site with a reported 320 million active monthly users, a 9.6% growth over the same period a year prior.[11] There are over 140 reported medical and health care uses of Twitter.[12] For treating tobacco use, in a randomized controlled trial (N=160), we found self-reported 60-days sustained abstinence was 40% for a Twitter quit smoking support group versus 20% for the comparison group ($p=.012$); 81% of the sample was non-Hispanic white.[13] To support broader reach and engagement, evidence of acceptability among Latino smokers is needed.

Social media is likely to be a viable platform for Latino adult smokers given the widespread use of the Internet, including for health information dissemination. A 2010 Pew Hispanic Center study reported that 83% of Latinos received health information from media sources, including 35% online;[14] furthermore, 64% reported having changed their behavior based on information from online health sources. From 2009 to 2013, Pew data indicated Latinos in the US crossed the “digital divide,” exceeding non-Hispanic Whites in cellphone ownership (86%), going online from a mobile device (75%), and social networking (68%).[15] Further, Latino consumers share via social media fivefold more often than non-Latino users. Among Latinos in the US who access social media, overall, 60% do so in English, 29% in Spanish, and 11% equally using English and Spanish; by nativity, 86% of Latinos born in the US use English, while 55% of foreign-born Latinos prefer Spanish. Within a context of low access to health care, high social media use, and differing language preferences, “eHealth” approaches have been suggested as ideal for reaching Latinos.[16] Untested is use of online social

networks to aid Latino adults with quitting smoking.

To inform a social network-based smoking cessation program, we conducted focus groups with Latino current and former smokers to determine if a tobacco cessation treatment distributed via social media would be acceptable. Secondary research aims were gathering information and feedback about local Latino smoking profiles, quit attempts, and social media exposure to inform the intervention strategy and community outreach efforts.

Methods

Sample. Participants were recruited in online classifieds (Craigslist), in person by community health-workers, and through word-of-mouth in Santa Clara County. Inclusion criteria were age 18 years or older; identifying as Latino/Latina; residing in the Santa Clara County area; and status as a current daily, social, or former smoker.

Procedures. The focus group moderator was fluent in Spanish and English. The groups were semi-structured. The moderator guide prompted about mobile phone and social media use, smoking, quitting smoking, and treatment preferences. An initial survey assessed participants' demographic and smoking history information. Study procedures were approved by the Stanford Institutional Review Board; all participants provided signed informed consent in Spanish or English, were compensated \$50 for their time, and received a meal during the focus group.

Data Reduction and Analysis. Each focus group was audio recorded. A Spanish/English bilingual coder initially listened to the focus group audio recordings and outlined initial coding themes, which were discussed and refined by the research team. The audio recordings were simultaneously translated and transcribed for a final written transcription in English. Using a detailed codebook, the same bilingual team member then coded the written transcripts for emergent and pre-identified themes of interest using Dedoose. A second coder utilized the codebook to review the coding of the written transcripts. Discrepancies were discussed with the senior author to come to consensus.

Results

Sample Description

A total of 32 individuals (15 men, 17 women) from Santa Clara County, California participated. Participants were 19 current daily smokers, 4 intermittent or non-daily smokers, and 9 former smokers. Daily smokers averaged 8.4 cigarettes per day (SD 10.4, Range:1-40) and nondaily smokers averaged 4.3 cigarettes per week (SD 3.8, Range: 1-8). Current smokers reported time to first cigarette upon waking within 5 minutes (n=3, 13%), between 6-30 minutes (n=3, 13%), between 31-60 minutes (n=6, 26%), and greater than 60 minutes (n=11, 48%). Factors that kept participants from smoking sooner included children, having to go outside to smoke, TV, and checking Facebook. Participants reported getting their cigarettes from friends (n=15), gas stations (n=13), liquor (n=12) and corner (n=12) stores.

All participants had made at least one 24-hour quit attempt (range: 1-7). Identified reasons for quitting related to money, work, a home smoking ban, family and friends, cancer fears, sports, and not feeling the urge to smoke. Among the 23 current smokers, 6 (23%) were not intending to quit in the near future (precontemplation), 7 (30%) intended to quit in the next six months (contemplation), and 10 (43%) were planning to quit in the next month (preparation). Three individuals reported assistance in quitting smoking from a medical provider. Only one reported use of nicotine replacement. No one reported use of other cessation medications or formal psychosocial supports to quit (e.g., group or individual counseling, quitline).

Most participants owned a smartphone (n=27, 84%); all but one kept their phone with them every day; and the majority reported having their phone turned on all the time (n=20, 63%), texting on their phone more than daily (n=26, 81%), and checking their Facebook page at least once daily (n=22, 69%).

Tobacco Use Association and Triggers

At the start of the focus groups, in a word association task (i.e., what word comes to mind when you think of smoking?), participants connected smoking to negative health and

social effects, in order of frequency: cancer, money, aging skin, and guilt. Participants also identified positive aspects of smoking including social activity, calming, weight-loss, and hobby.

Triggers for smoking were mentioned throughout the focus group conversations. In order of frequency with counts indicated (#), participants identified stress (11) from school, work, family, and traffic; negative emotions (6) such as anger and anxiety; alcohol use (4); other habitual triggers (4); others smoking (3); work breaks (2); boredom (2); seeking relaxation (2); and smoking for GI regularity (1). Notably, social media was not identified as a trigger to smoke.

Motivations for Quitting Smoking

While a minority of participants were former smokers, all had experience with quitting for at least 24-hours. Motivations for quitting centered around family, including children, siblings, partners, and parents.

“..I would hide my cigarettes, I used perfume so that my son couldn’t smell the cigarette, I would wash my hands, but on one occasion he looked at me and he said, ‘Oh, you’re smoking!’ I felt like a bucket full of water fell over me, he said, ‘Do you want to die? If you don’t care about me, continue smoking.’ His words hurt me so much that in 15 days I quit because I thought that a cigarette was not more important than my son. It was very hard, I had terrible headaches, shaking... but the love for my son is what helped me quit smoking.”

Life transitions also were a common theme, overlapping with family concerns, as pregnancies and babies were prominent transitions. Two women and a man successfully quit during a family pregnancy. As one woman shared, *“I started smoking when I was 13, and I quit smoking when I was 41, because I got pregnant. After 28 years it was very difficult for me to quit smoking, but it was the promise I made because I got pregnant, and I haven’t smoked for 15 years.”*

Another woman described her shame and concerns around not being able to quit during pregnancy: *“My last pregnancy – I did smoke. It caused me a lot of pain, and I have four*

children with asthma because I smoked when I would breastfeed. My youngest girl also has asthma. I've always had bronchial disease, and my kids would tell me, "I don't want you to die." I knew it was wrong, but I would get mad, or I'd get sad, and I would get out to smoke. Sometimes I get an urge to smoke, but I love my children a lot, and I want to live for them."

Additional influences identified as motivating cessation were religious faith, medical advice, and financial and health concerns. One participant said her sister became a Christian and stopped smoking, while another shared her promise to God to quit smoking. A third participant shared: *"I always would ask my God, 'You know what? I can't do this alone, help me to give up this obsession.'"*

Social Support and Community

The importance of social support and community were identified as themes. Participants noted that *"two heads think better than one"* and emphasized a shared belief that humans are social beings. Another explained, *"Sometimes we only need support... you can succeed because there's somebody who wants the same for you."* The salience of broader community support was particularly relevant in the context of the isolation of immigration. One participant talked of a friend who confided she only smoked because she was lonely and sad as an immigrant. She shared, *"Sometimes people need to be in a group to be able to see how other people are trying hard to quit in order to encourage themselves to quit too. Some people are in this country and they are alone, so I think [support] would help them."*

Social Media for Quitting Smoking

Platforms. Participants reported using various social media platforms including Facebook, Twitter, Instagram, Skype, Yahoo, and Snapchat. The groups stated a strong preference for Facebook and visual messages. The overall sentiment across groups was acceptability of social media as a vehicle for quit smoking programs. One participant stated, *"I think this idea is very good because ... we're 100% cybernetic... and [social media] is the right weapon to use."* Another asserted, *"I think it would be a magnificent idea because...I have*

people on there [Facebook] that put they feel bad, ...and we send them a message, and it helps.” Further, social media quit smoking groups were imagined as supportive of quitting, in contrast to existing social networks of smokers who may encourage continued smoking. Participants also liked the idea of knowing that strangers in a group would withhold judgment toward any failed quit attempts.

Not all agreed, however, with one participant stating his family and friends would be better able to support his quitting compared to “a group of strangers.” Another voiced concern explaining, “I don’t know how comfortable people would be about going into a group... share with someone that they don’t know. Being anonymous... especially since Latinos... we tend to be more like, who do I know versus I don’t know you. I think that might become an issue.” Another participant resisted the idea of spending more time on her phone, noting that as a parent, her time at home is already too hectic.

Group Formation. Participants discussed whether the groups should be matched on salient characteristics. One social smoker, for instance, wanted to be in a group of non-daily social smokers. Another participant suggested creating groups based on common interests, similar to as done on “dating sites.” A discussion centered on matching by age. One young adult participant stated, “If I see a young person trying to stop... we can do it together.” Another participant voiced potential benefits of mixed-age groups stating, “...different ages could help. I know that for the young ones, the pressure they have is very difficult, even more if they’re in school, they get stressed out, and they want to relax. So having an adult in that group who has more knowledge could be beneficial to them.” Others encouraged keeping age unknown. A participant reflected, “the most convenient thing is to have the ages unknown because maybe the one who is smoking really needs help. If they say, ‘Oh, it’s a person who is 60,’ and they’ll say, ‘What’s this old man or woman going to know?’” Another participant, with the perspective that age should not matter, asserted, “Cancer doesn’t look at ages, or race.”

Language Preference. With regard to language preference for a Latino focused quit

smoking social media intervention 7 participants preferred a mixed English/Spanish group; 4 preferred Spanish only, and 1 preferred English only. Three additional participants did not have a preference, and opted for group leaders to choose. The other 17 participants did not voice a preference. All participants, except the one who preferred English only, reported that Spanish was their dominant language.

Messaging. Participants shared advice on the types of smoking messages that would be most effective for individuals trying to quit smoking. There was a preference for non-forceful communication with no demanding messages: *“Don’t push; We’ll do it because we want to do it.”* Preferred messages were educational and provided motivation and support. A participant emphasized, *“It’s important that we know why we are making the decision to quit. It’s good to help us understand why we made decisions to quit.”* Participants also recommended linking social media quit interventions with existing support systems and services, such as the national smokers quitline (1-800-QUIT-NOW).

Use of visual images also was encouraged: *“a picture has a bigger impact than a word.”* One participant shared, *“I have a friend and he’s a doctor and he continuously post lungs ...[and information] about cigarette filters.”* Two participants said it was uncommon to see images or information about smoking on social media, while others noted postings of drinking and smoking at parties rather than encouragement to quit.

E-cigarettes

Despite not being part of the discussion guide, e-cigarettes represented an emergent topic with a variety of expressed opinions. Some participants were positive towards e-cigarettes with assertions that: *“They’re not as bad as cigarettes”*; *“they’re cheaper than tobacco”*; and not a *“bother”* to others with a bad smell. Participants reported seeing e-cigarette advertising cessation claims, although no one reported successfully quitting smoking using e-cigarettes. Participants reported a willingness to try e-cigarettes, largely out of curiosity instead of a desire to quit smoking.

Discussion

Bay Area California Latino smokers and recent former smokers largely found the concept of a social media tobacco cessation intervention acceptable. In particular, social media was perceived to be well-equipped to meet the social- and community-oriented experience of Latinos. Participants also noted that social media could allow for further tailoring of support groups based on homophilous characteristics related to age, smoking frequency, and language preference. A preference was stated for Facebook, due to participant familiarity with the platform and the ability to leverage visual as well as text content. Visual communication of health information improves comprehension, enhancing attention, memory, and recall.[17] Our team's recent evaluation of Tweet2Quit in a largely non-Hispanic White sample found that participant engagement (i.e., tweeting) predicted success in quitting.[13] More visual messages, as attention-attractors, may encourage quitting success through increased engagement.

Focus groups have been used in research to explore the experience of smoking cessation among ethnic minorities and have highlighted the importance of considering levels of acculturation in program tailoring.[18] Although our groups did not expressly discuss acculturation, participants highlighted a desire for social media quit smoking groups constructed around similar age and language preference, two potential indicators of acculturation.

Family orientation, social support, and community were prevailing themes in the focus group discussions of smoking, quit attempts, and social media use, providing a basis for why social media may be particularly well-suited for a Latino-focused quit smoking intervention. Participants noted the opportunities for community-building in social media venues, which have not previously been available through traditional websites or quitline interventions. Since the Latino experience of quitting is also conceptualized as a family or group effort, social media may address previous calls to tailor interventions for racial/ethnic-specific processes of quitting.

As a local qualitative study, generalizability of our results is limited. The group moderator was Spanish-fluent, and coding was done via listening in Spanish; however, final analysis of

transcripts was conducted in English, which may have reduced or changed content in unpredictable ways. Despite these limitations, findings with respect to acceptability of social media, importance of family in health behavior change, and preference for visual material are likely broadly relevant.

In conclusion, a social media-delivered intervention to support smoking cessation appears acceptable for Latino smokers. With regard to immediate implications, the study findings support efforts to develop novel interventions for treating tobacco use via social media. The interventions may be tested as standalone cessation programs or as adjuncts to existing treatments. For cultural relevance, message themes within the program should attend to family and community ties and influences. For maximum engagement and inclusiveness, flexibility in language use (English, Spanish, both) should be permitted and encouraged. The specific social media platform may be determined by use rates and fit of the technology for the intervention's approach and privacy concerns. For reaching Latino smokers, to engage in a social media quit smoking intervention, based on tobacco purchasing behavior, targets would include encouraging word-of-mouth referrals via friends and point-of sale marketing in gas stations and liquor and corner stores.

Latino use of social media is high; however, use of the media for health behavior change appears to be underdeveloped. As such, our next steps will center on development and testing of a Latino-specific, bilingual, private, support-group based social media intervention for smoking cessation. Of keen interest will be examination of homophily in group communications; that is, seeing whether directed and reciprocated communications align around shared member characteristics (e.g., gender, age, daily/nondaily smoking status, language preference).

References

1. U.S. Department of Health and Human Services, The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. 2014, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health: Atlanta, GA. PMID:24455788
2. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion, Surgeon General's Report—Tobacco Use Among U.S. Racial/Ethnic Minority Groups, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, Editor. 1998: Atlanta, Georgia. PMID:9784089
3. United States Census Bureau. California QuickFacts from the US Census Bureau. 2015.
4. Fiore MC, et al. Treating Tobacco Use and Dependence: 2008 Update. 2008, U.S. Department of Health and Human Services. Public Health Service: Rockville, MD. Available from: <http://bphc.hrsa.gov/buckets/treatingtobacco.pdf>
5. Blanco L, Garcia R, Perez-Stable EJ, White MM, Messer K, Pierce JP, Trinidad DR. National trends in smoking behaviors among Mexican, Puerto Rican, and Cuban men and women in the United States. *Am J Public Health* 2014 104(5):896-903. PMID:24625159
6. Paula Cupertino A, Cox LS, Garrett S, Suarez N, Sandt H, Mendoza I, Ellerbeck EF. Tobacco use and interest in smoking cessation among Latinos attending community health fairs. *J Immigr Minor Health* 2011 13(4):719-724. PMID:20936430
7. Cox LS, Cupertino AP, Tercyak KP. Interest in participating in smoking cessation treatment among Latino primary care patients. *J Clin Psychol Med Settings* 2011 18(4):392-399. PMID:21984387
8. Perez-Stable EJ, Sabogal F, Marin G, Marin BV, Otero-Sabogal R. Evaluation of "Guia para Dejar de Fumar," a self-help guide in Spanish to quit smoking. *Public Health Rep* 1991

106(5):564-70. PMID:1910191

9. Lawrence D, Graber JE, Mills SL, Meissner HI, Warnecke R. Smoking cessation interventions in U.S. racial/ethnic minority populations: an assessment of the literature. *Prev Med* 2003 36(2):204-16. PMID:12590996
10. Cox LS, Okuyemi K, Choi WS, Ahluwalia JS. A review of tobacco use treatments in U.S. ethnic minority populations. *Am J Health Promot* 2011 25(5 Suppl):S11-30. PMID:21510783
11. Desilver D. 5 facts about Twitter at age 10. 2016 Available from:
<http://www.pewresearch.org/fact-tank/2016/03/18/5-facts-about-twitter-at-age-10/>.
12. Baumann, P. 140 Health care uses for Twitter. Jan 16, 2009; Available from:
<https://vpn.nacs.uci.edu/+CSCO+0h756767633A2F2F637576796F6E687A6E61612E70627A++/140-health-care-uses-for-twitter/>.
13. Pechmann C, Pan L, Delucchi K, Lakon CM, Prochaska JJ. Randomised controlled trial evaluation of Tweet2Quit: a social network quit-smoking intervention. *Tob Control* in press
PMID:26928205
14. Livingston G, Minushkin S, Cohn D. Hispanics and Health Care in the United States, PewResearchCenter, Editor. 2008: <http://www.pewhispanic.org/2008/08/13/hispanics-and-health-care-in-the-united-states-access-information-and-knowledge/>.
15. Lopez MH, Gonzalez-Barrera A, Patten E. Closing the Digital Divide: Latinos and Technology Adoption, PewResearchCenter, Editor. 2013:
<http://www.pewhispanic.org/2013/03/07/closing-the-digital-divide-latinos-and-technology-adoption/>.
16. Victorson D, Banas J, Smith J, Languido L, Shen E, Gutierrez S, Cordero E, Flores L. eSalud: designing and implementing culturally competent ehealth research with Latino patient populations. *Am J Public Health* 2014 104(12):2259-65. PMID:25320901
17. Houts PS, Doak CC, Doak LG, Loscalzo MJ. The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence.

Patient Educ Couns 2006 61(2):173-90. PMID:16122896

18. Fu SS, Burgess D, van Ryn M, Hatsukami D, Solomon J, Joseph AM. Views on smoking cessation methods in ethnic minority communities: a qualitative investigation. *Prev Med* 2007 44(3):235-40. PMID:17175016