Title

Disseminating Tobacco Control Information to Asians and Pacific Islanders

Journal

Journal of Cancer Education, 30(1)

ISSN

0885-8195

Authors

Tat, John

Nguy, Mike

Tong, Eric K

et al.

Publication Date

2015-03-01

DOI

10.1007/s13187-014-0695-x

Peer reviewed

J Canc Educ (2015) 30:26–30
DOI 10.1007/s13187-014-0695-x

Disseminating Tobacco Control Information to Asians and Pacific Islanders

John Tat · Mike Nguy · Eric K. Tong · Aaron J. Cheng · Lois Y. Chung · Georgia Robins Sadler

Published online: 28 June 2014

Abstract The *Asian Grocery Store-Based Cancer Education Program* (*the Program*) is a proven strategy for promoting early breast cancer detection among Asian American women. The authors sought to test whether the same public health model can become an effective strategy for increasing the Asian community's awareness of the *California Smokers' Helpline* (*the Helpline*) and thereby, potentially decreasing this community's use of tobacco products. The new module, mainly staffed by four well-trained, volunteer undergraduates, explained the risks of first- and second-hand tobacco exposure and how to access the Helpline's services. A brochure, provided in English, Chinese, Korean, and Vietnamese (the Helpline's available Asian languages), was used to guide the bicultural, bilingual students' tobacco-related discussions with shoppers. The students' repeated presence at the nine partnering Asian grocery stores served as reminders of the Helpline's availability. In its first year of operation, the student trainers reached 1,052 men and 1,419 women with tobacco cessation messages. Equally important, the participating grocery stores' managers did not object to students telling their customers to quit using the tobacco products sold in their stores. The results suggest that the Program's tobacco cessation module is a viable, community-specific, public health strategy. It is also a strategy with the potential for applications to reduce other health threats.

Keywords Lung cancer · Cessation · Tobacco · Helpline · Prevention · Asian Pacific Islander

Introduction

In the USA in 2014, new cases of cancers of the lung and bronchus (N=224,210) are expected to account for 14 % of all cancer diagnoses in men and 13 % in women [1]. Among men and women, lung cancer is the leading cause of cancer deaths [1–3]. Among men, it accounts for 28 % of all cancer deaths and among women, 26 %. These mortality rates are even higher if tobacco-related laryngeal and other respiratory organ cancers are included [1].

Within the Asian Pacific Islander (API) community, tobacco use is around 10.7 %. While this is the lowest rate among the larger ethnic groups [4], between 1990 and 2008, lung cancer was one of the top five most commonly occurring cancers among APIs of all ethnic groups and genders [5]. In California, between 2007 and 2011, lung cancer is among the top three cancers diagnosed among Chinese, Japanese, Filipino, Hawaiian, Korean, Pacific Islander, and Vietnamese [6]. These data are particularly worrisome given that the API community is one of the fastest growing ethnic groups in the USA, and currently, comprises 6 % of the total population [7].

Disaggregating the API community by language and gender discloses large variations in smoking prevalence. For example, in one study, the smoking prevalence among Cambodian men and non-English-speaking Vietnamese men

J. Tat
Department of Cell and Molecular Biology, The Scripps Research Institute, 10550 North Torrey Pines Rd MB-07, La Jolla, CA 92037-1000, USA

J. Tat
Kellogg School of Science and Technology, The Scripps Research Institute, 10550 North Torrey Pines Rd MB-07, La Jolla, CA 92037-1000, USA

J. Tat · M. Nguy · E. K. Tong · A. J. Cheng · L. Y. Chung · G. R. Sadler
UCSD Moores Cancer Center, 3855 Health Sciences Drive MC 0850, La Jolla, CA 92093-0850, USA

G. R. Sadler (✉)
Department of Surgery, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0850, USA
e-mail: gsadler@ucsd.edu

remained much higher than men nationwide despite a 4-year, focused intervention [8]. A comparison by gender showed that while there was an inverse relationship between cigarette smoking and acculturation among Chinese, Japanese, and Korean men, there was a positive relationship between cigarette smoking and acculturation among Chinese and Korean women, with the positive relationship being insignificant among Japanese women [9].

In California, the *California Smokers' Helpline* (*the Helpline*) has proven to be an effective strategy for helping people to quit tobacco use [10, 11]. Fully funded by tobacco taxes, smokers or their proxies can call the Helpline for quit advice. Counselors offer a choice of services in multiple Asian languages, including one-on-one counseling over the phone for callers who are ready to set a quit-date. Self-help materials and a list of other cessation programs are offered to callers who are not yet ready to set a quit date.

Prior research showed that those who called the Helpline were twice as likely to successfully quit compared to those who did not [10]. However, the Helpline's data showed that proportionally fewer English-speaking APIs contacted the Helpline for quit assistance as compared to Euro-White Americans [12]. It is possible that this lower usage may be the result of reduced awareness of tobacco cessation resources among API members [13]. Furthermore, there has been less enthusiasm for promoting APIs' use of the quit-lines, at least partly due to the plethora of subcommunities that must be served within the API community [14, 15].

Failure to provide comparable tobacco control access to the API community will contribute to the creation of growing gaps in health disparities. Tobacco use within the API community can be expected to worsen due to such influences as targeted marketing by the tobacco industry, lack of culturally and linguistically tailored prevention and control programs, and the limited impact of mainstream tobacco control programs on the API community [16, 17]. Thus, when linguistically and culturally competent tobacco cessation programs do exist to serve the API community, such as with the Helpline, new strategies are needed to promote widespread use of such programs.

The API-student-staffed *Asian Grocery Store-Based Cancer Education Program* (*the Program*) had previously been shown to be successful for raising the API community's awareness and knowledge of breast cancer and promoting adherence to breast cancer screening guidelines [18–23]. Full details of this breast cancer control outreach module are described in earlier papers [24, 25]. The *Breast Cancer Program* now runs through a campus student club, receiving $400 per year in operating expenses.

Given the success and cultural acceptability of the Breast Cancer Program, this student outreach team proposed to repurpose and adapt that program, so it could be used to deliver information that raised awareness about the dangers associated with prolonged tobacco use and promote the use of the Helpline within the API community.

The new module would inform the API community about the health, economic, and social consequences of tobacco use and the option of securing the Helpline's free and readily accessible tobacco cessation counseling. Because the new outreach module would actively discourage the public from purchasing tobacco products being sold at the participating grocery stores, there was the recognized risk that the stores would stop permitting the Cancer Education Program to use the stores' space free of charge.

Another study led by the senior author demonstrated that repurposed, but comparable public health programs, may not necessarily achieve comparable outcomes [26]. Such findings underscore the importance of conducting preliminary demonstration studies to determine if there is sufficient evidence to warrant a larger, definitive research study. This paper describes the tobacco cessation module's developmental process and the pilot study's preliminary assessment of the adapted module. It also discusses the public's and grocery stores' receptivity to the intervention, the ease of implementing the adapted model, and the module's sustainability.

Methodology

The study gathered only observational data and thereby, required neither the consenting of participants, nor the collection of personal data, such as smoking status, age, and ethnicity. A manageable subset of nine of the Program's 24 participating Asian grocery stores were shown the new module and asked to allow pilot testing of the module at their stores; all agreed.

Development of the Module

Table 1 displays the basic constructs of the breast cancer module that were deemed relevant to the foundation of the lung cancer module. Four undergraduate basic and behavioral science majors were recruited to help adapt the breast cancer module for use as a tobacco cessation module. The students were bicultural and bilingual in English and at least one of the three Asian languages offered by the Helpline: Chinese (Cantonese and Mandarin); Korean; and Vietnamese. The students' focused on assuring that the module's content included relevant biomedical information and sociobehavioral/cultural insights.

The National Cancer Institute and the American Cancer Society offered training materials that could serve as the basis for creating the content of the new module. The development of the module's content and printed brochure adhered to the first four elements of the Health Belief Model: (1) showing there are problems linked to tobacco use; (2) showing there is a personal and communal threat from the problem; (3)

Table 1 Essential constructs of an Asian Grocery Store-Based Cancer Education Module

1. Enough culturally/linguistically aligned students interested in delivering a new module
2. Training materials from a topic authority on which to base new module's content
3. Information conveyable in oral and print form for sharing with others
4. Module contents that can be mastered in a few hours by outreach students
5. Module contents that can be tested for mastery
6. Module can be accommodated at the Asian grocery stores
7. Training materials can be readily transported to the outreach sites
8. Interactions with the public that can be monitored and honed by the lead trainers

offering a viable solution to the problem; and (4) showing that the benefits of the solution outweigh the disadvantages of implementing the solution. The brochure relayed information about (1) the many health threats caused by tobacco use; (2) the particularly high incidence of lung, oral, and bronchial cancers within the API community; (3) the availability of the Helpline and its promise of strategies to cope with the challenges of quitting; and (4) how the benefits of quitting tobacco use exceed the benefits of continued tobacco use, both to the users and their loved ones. The module included encouragements to motivate people to quit, suggestions to help people quit, suggestions for how to refer others to the Helpline, and an explanation of how to access the free Helpline, which is already paid for by California's cigarette tax.

To assure that the English used in the module was broadly understandable, the Dolch List of fifth grade vocabulary was employed in the creation of the module and its brochure. This level of readability was confirmed using the Flesch-Kincaid assessment tool on Microsoft Word 2010 [27]. To assure clarity, the module was pilot tested and further honed. It was then forwarded and back translated into the Helpline's three Asian languages: Chinese (Cantonese and Mandarin); Korean; and Vietnamese.

Overall, the module relayed sophisticated scientific information in a culturally aligned manner that could be understood by a diverse API audience, many of whom were expected to be recent immigrants to the USA.

Training Protocol

Critical to the success of the overall outreach program was students' ability to become competent and comfortable with delivering the module's content within as little as 3 hours of training time. They were given a set of training materials related to the basic biomedical, clinical, and social aspects of tobacco use and tobacco-related cancers to guide their preparation for the 42-item true-or-false tobacco-control knowledge test. Student must score at least 90 % on that test to participate in the Asian grocery store-based outreaches.

While preparing to take the knowledge test, students attended weekly lab meetings and practiced simulated interactions similar to the ones they would be likely to encounter on actual outreaches. Students were also required to become HIPAA-certified because of the possibility that personal health information might be discussed during an outreach conversation.

On-going and on-site monitoring of the quality of each student educator's interactions was the responsibility of each outreach team's leader. Students earned the right to lead a team based on growing experience on the team and demonstration of expertise with the content.

Outreach Protocol

During the Program's outreaches, the multilingual brochures were disseminated by the students. As shoppers entered or left the grocery stores, one of the module's bicultural/bilingual students engaged them in a brief social conversation to determine their language preference and then, using the shopper's preferred language, transitioned into a conversation about tobacco-related health issues. During the engagement, the brochure (1) helped to guide the students' discussions with shoppers; (2) helped students to deliver a consistent message; and (3) was given to the shoppers at the end of their interactions to serve as a reminder call-to-action and to share with others. The fifth element of the Health Belief Model, the need for repeated cuing, was accomplished by having the Program's students repeatedly deliver their messages at the participating Asian grocery stores.

When a member of the API community's preferred language was other than English, Chinese, Korean, or Vietnamese, the Program's students hand wrote a note on the brochure in English, explaining that the Helpline could be accessed via an interpreter. It was hoped that the shopper would show the note to a family member who could read the English note.

Development of Unobtrusive Measure

To measure the impact of their message delivery, a group of nonobtrusive measures was selected as outcome indicators [28]. Students noted the number of copies of the tobacco cessation brochure at the beginning of each outreach session and then tried to give a copy to every person with whom they spoke. They also recorded a code for the type of dialogue they had related to each brochure (in-depth, brief, or rejection). Conversations were coded as "in-depth" when the students were able to (1) address the first four content elements of the Health Belief Model related to tobacco cessation; (2) explain how to access the Helpline's services; and (3) describe how the Helpline operated. "Brief" meant that the customer engaged in a more limited discussion of the previous three points

and took the brochure. The conversation was coded as a "rejection" when the shopper refused the verbal interchange offered and the brochure. However, even for those who were categorized as a "rejection," the presence of the student educators and/or the memory of their exhibit at the store during subsequent visits had the potential to serve as a cue to considering tobacco-related behavioral change.

Results

Results from the first year of the Program's operation showed that the tobacco cessation outreach team conducted 38 outreach events, each lasted between 2 and 4 hours. Of the 2,471 community members who were approached with information about smoking and lung cancer during these events, 98 accepted in-depth messaging, 1,816 people accepted brief messaging, and 557 people rejected the messaging.

Of the 2,471 people approached, 1,052 were men, where 834 accepted either the brief messaging or in-depth messaging and 218 rejected the messaging. Of the 1,419 women approached, 1,080 accepted either the brief messaging or in-depth messaging and 339 rejected the information. Since discussion data were not collected by gender, a more refined breakdown of these numbers is not possible (see the last paragraph in the "Discussion" section for limitations).

Most people (67 %) accepted the proffered information and brochure. They told the students they would either call the Helpline themselves for an exploratory conversation, or if they were nonsmokers, they would pass on the information to someone they knew who was a tobacco user.

The Program's team reported that nearly all of their conversations were with people who purported to be nonsmokers. However, in the few instances when a smoker became engaged in a conversation with them, a lack of knowledge of the Helpline was nearly universal. Tobacco users expressed appreciation for the information, and particularly appreciated knowing that here was a free service to help them.

The tobacco cessation module did not diminish the delivery of the breast cancer module. During the same period, the breast cancer education module team reached 2,706 women via 30 outreach events, of which 78 accepted the in-depth discussion option, 2,024 accepted a brief discussion, and 604 rejected the proffered information. The trainers involved with this module focused their effort primarily on women shoppers, so there are no data on males' receptivity.

Discussion

The four-person outreach team successfully repurposed the breast cancer module into a tobacco cessation module that adhered to the original constructs of the breast cancer module. The observational pilot study demonstrated the community's positive receptivity to the new module and ease of implementation. All nine participating stores endorsed the module's messages through their continued permission to use the store's space pro bono, thus demonstrating the module's sustainability.

Moreover, a benefit of adapting the Program to include a tobacco cessation module was that it offered the opportunity to deliver the same on-going cuing messages as the breast cancer module, thereby embodying the key fifth element in the Health Belief Model. That element is equally essential in promoting motivation to quit tobacco use and sustain the quit.

This demonstration project showed that even with a small workforce and a minimal budget, the Program's modules were effective, as demonstrated by the sheer volume of highly personalized, linguistically and culturally aligned breast and tobacco cues delivered to API community members. Indeed, the Helpline should be better utilized by APIs once they are aware that it is available in most of the native languages of API subgroups [13, 15]. Since the Helpline collects usage statistics, it will be possible to monitor gradual shifts in use by the API community over time. More research is needed to determine whether the outreach program triggered an increased call volume to the Helpline. This was planned as part of the present study, but an unexpected media promotion of the Helpline to the Asian community, launched midway through this intervention, made it impossible to determine how to attribute any analysis of the Helpline call volume data.

Both educational modules were well accepted by the API community suggesting that the constructs that underpinned the Breast Cancer Education Program can be adapted and repurposed towards educating the public about other aspects of cancer. Notable is that this study demonstrated that while Asian grocery stores are generally seen as the province of Asian women, these venues proved to be effective at reaching Asian men directly and indirectly.

There were limitations to this study. As an unfunded demonstration study, it was not feasible to collect baseline and behavioral outcomes data. While APIs were generally receptive to the tobacco-related discussions, more research is needed to determine if smokers were disproportionately represented in the groups that rejected the students' messaging about tobacco cessation. Further, because the purpose of this study was not to describe in-depth the demography of the people who received the outreach, it was not possible to characterize the smoking status of each person. A further limitation of this study was that the observational data collection tool failed to be adapted for the focused inclusion of men in the study. This was corrected midway through the study, but not in time to produce meaningful data for inclusion in this summary of the observational study's findings.

Conclusion

This demonstration study to pilot test the tobacco cessation educational module underscored the broader public health opportunities offered by the Asian Grocery Store-Based Cancer Education Program. The pilot testing of this tobacco cessation module also confirmed that adaptation of the breast cancer module into a new module to address tobacco-related cancer was also a viable strategy. The study further confirmed that this new public health module could be initiated and sustained by a group of dedicated and well-trained students and be accomplished at a very low cost.

References

1. Siegel R, Ma J, Zou Z, Jemel A (2014) Cancer statistics, 2014. CA A Cancer J Clin 64(1):9–29
2. CDC. Cancer among men (2012) [cited 2012 July 18]; Available from: http://www.cdc.gov/cancer/dcpc/data/men/htm
3. CDC. Cancer among women (2012) [cited 2012 May 1]; Available from: http://www.cdc.gov/cancer/dcpc/data/women.htm
4. CDC. Adult cigarette smoking in the United States: current estimates (2014) [cited 2014 25 March]; Available from: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm
5. State-specific trends in lung cancer incidence and smoking—United States, 1999-2008. Mmwr. Morbidity and Mortality Weekly Report, 2011. 60(36): p. 1243-7
6. Society AC (2014) California cancer facts and figures. p. 15
7. Asian American Center for Advancing Justice. A community of contrasts: Asian Americans in the United States: 2011 (2011) [cited 2013 18 August]; Available from: http://www.advancingjustice-aajc.org/sites/aajc/files/Community_of_Contrast.pdf
8. Liao YL, Tsoh JY, Chen R (2010) Decreases in smoking prevalence in Asian communities served by the Racial and Ethnic Approaches to Community Health (REACH) Project. Am J Public Health 100(5): 853–860
9. Kim SS, Ziedonis D, Chen KW (2007) Tobacco use and dependence in Asian Americans: a review of the literature. Nicotine Tob Res 9(2): 169–184
10. Zhu SH, Anderson CM, Tedeschi GV et al (2002) Evidence of real-world effectiveness of a telephone quitline for smokers. N Engl J Med 347(14):1087–1093
11. Zhu SH, Cummins SE, Wong SS et al (2012) The effects of a multilingual telephone quitline for Asian smokers: a randomized controlled trial. J Natl Cancer Inst 104(4):299–310
12. Zhu SH, Wong S, Stevens C et al (2010) Use of a smokers' quitline by Asian language speakers: results from 15 years of operation in California. Am J Public Health 100(5):846
13. Asian American, Native Hawaiian & Pacific Islander-National Networks for Tobacco Control & Prevention. Asian Americans, Native Hawaiian & Pacific Islanders and tobacco use. (2012) [cited 2012; Available from: http://tobaccopreventionnetworks.org/site/c.ksJPKXPFJpH/b.2588491
14. Zhuan Y, Zhu S, Lew R et al (2011) What are the barriers to an Asian-language quitline service? American Public Health Association, Washington
15. Chen MS, Tang H (2007) Review of smoking cessation research among Asian Americans: the state of the research. Nicotine Tob Res 9(Suppl 3):S485–S493
16. Muggli M, Pollay R, Lew R, Joseph A (2002) Targeting of Asian Americans and Pacific Islanders by the tobacco industry: results from the Minnesota Tobacco Document Depository. Tob Control 11(3): 201–209
17. Fong T, Tsuang J (2007) Asian-Americans, addictions, and barriers to treatment. Psychiatry 4(11):51
18. Sadler GR, Wang K, Wang M, Ko C (2000) Chinese women: behaviors and attitudes toward breast cancer education and screening. Women Health Iss 10(1):20–26
19. Sadler GR, Dong H, Ko C, Nguyen H (2001) Vietnamese American women: breast cancer knowledge, attitudes, and screening adherence. Am J Health Promot 15(4):211–214, ii
20. Sadler GR, Dhanjal S, Bhatia N et al (2001) Asian Indian women: knowledge, attitudes and behaviors towards breast cancer early detection. Public Health Nurs 18(5):357–363
21. Sadler GR, Ryujin LT, Ko C, Nguyen E (2001) Korean women: breast cancer knowledge, attitudes and behaviors. BMC Public Health 1:7
22. Sadler GR, Takahashi M, Ko C, Nguyen T (2003) Japanese American women: behaviors and attitudes toward breast cancer education and screening. Health Care Women Int 24:18–26
23. Ko C, Sadler GR, Ryujin L, Dong A (2003) Filipino American women: breast cancer knowledge, attitudes and behaviors. BMC Public Health 3(1):27
24. Sadler GR, Nguyen F, Doan Q et al (1998) Strategies for reaching Asian Americans with health information. Am J Prev Med 14(3): 224–228
25. Sadler GR, Thomas AG, Yen JY et al (2000) Breast cancer education program based in Asian grocery stores. J Cancer Educ 15(3):173–177
26. Sadler GR, Ko C, Nguyen T (2014) Lessons learned from the Black Cosmetologists Health Program; a randomized controlled trial testing a diabetes education program. J Commun Health Accepted for Publication
27. Dubay W (2004) Principles of readability. Available from: http://www.nald.ca/library/research/readab/readab
28. Web E, and Campbell D (1966) Unobtrusive measures: nonreactive research in the social sciences. p. 5-10