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## Using Photovoice to Assess and Promote Environmental Approaches to Tobacco Control in AAPI Communities

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### Abstract

Asian American and Pacific Islander (AAPI) communities face enormous health disparities, with tobacco use contributing to high rates of cancer and heart disease. There is growing interest nationwide on the influence of environmental factors on tobacco use. AAPI communities have been found to have higher exposures to tobacco company marketing compared to the general population. The authors describe the use of Photovoice (a qualitative needs assessment technique) to empower AAPI youth to identify and understand environmental characteristics associated with tobacco use in four AAPI communities in California and Washington. Of the six major environmental themes identified from the photos, three themes were found across all four communities. Debrief sessions with youth and community leaders underscore the relevance of Photovoice for identifying community needs and motivating community organization for change. Despite some logistical challenges, Photovoice exemplifies the power and potential of this community-based methodology to capture how the environment influences youth on tobacco use.

### Keywords

tobacco use; qualitative; needs assessment; environment; Asian American; Pacific Islander; youth; Photovoice

### BACKGROUND

Despite nearly three decades of successful tobacco prevention and control efforts, cigarette use among adolescents and young adults remains high particularly in ethnically diverse communities (Centers for Disease Control and Prevention, 2006). Recently, research has exposed the potent power of influences in the physical environment, such as advertising and nonoutdoor smoking (Cummings et al., 2009), on the initiation of smoking among youth. For instance, a recent study reported that youth who live in communities with more advertising and availability of tobacco products were more likely to have smoked (Novak, Reardon, Raudenbush, & Buka, 2006). A meta-analysis of exposure to tobacco marketing in

films found a twofold increase of initiating tobacco use among youth 18 years old and younger (Wellman, Sugarman, DiFranza, & Winickoff, 2006). Media can also facilitate smoking prevention; a study of pro- and antitobacco media among youth in California found that antitobacco advertisements were protective against susceptibility to adolescent smoking (Weiss et al., 2006). Lastly, school-based smoking bans for outdoor smoking among staff have been associated with lower levels of youth tobacco use (Barnett et al., 2007).

Asian American, Native Hawaiian, and Pacific Islander (AAPIs) are the fastest-growing racial/ethnic population, doubling in size from 1990 to 2004 (Asian Pacific American Legal Center, 2005); in 2006, AAPIs comprised approximately 14% of California's and 9.3% of Washington's population (Asian and Pacific Islander American Health Forum, 2009). With regards to marketing, a review of tobacco industry documents from the 1990s revealed that companies developed specific advertisement and promotion strategies to market cigarettes and other tobacco products to AAPI customers, including targeting AAPI small business owners and supporting cultural events with wide exposure to AAPI immigrants (Muggli, Pollay, Lew, & Joseph, 2002). Researchers have also described AAPI neighborhoods in San Diego and San Francisco as having the highest concentration of cigarette billboards and "tobacco supportive" environments among all ethnic neighborhoods (Bader, 1993; Wildley et al., 1992). Lastly, studies document that high proportions of AAPIs are not protected by workplace antismoking policies (Barnett et al., 2007).

AAPI youth have high rates of smoking, which may reflect their unique exposures to previously described tobacco advertising and promotion in the environment. Data from the American Legacy Foundation's 2000 National Youth Tobacco Survey indicate that by the end of high school, 33% of Asian American and 32% of Hawaiian/Pacific Islander youth are smokers (Appleyard, Messeri, & Haviland, 2001). Beyond these few studies, little is known about the environmental factors associated with smoking initiation for AAPI youth (Lew & Tanjasiri, 2003).

This article describes the use of Photovoice as a community-based participatory research (CBPR) strategy among AAPI youth to identify and understand environmental characteristics associated with tobacco initiation and use in four racial/ethnic communities of California and Washington: Cambodians, Chamorros, Southeast Asians, and multiethnic AAPIs. This article describes the action-oriented processes used in this 3-year effort (2004–2007) to identify and train youth on Photovoice, impacts on youth participants and community change, and recommendations for future CBPR efforts with AAPIs and other communities of color.

## METHODS

### Community-Based Participatory Research

The study team consisted of representatives from one national and four local community-based organizations (CBOs) and one university: Asian Pacific Partners for Empowerment Advocacy and Leadership (APPEAL), Guam Communications Network (GCN) and Families in Good Health (FIGH; both located in the same city in California), Asian Pacific Psychological Services (APPS; also located in California), Washington Asian/Pacific Islander Families Against Substance Abuse (WAPIFASA; located in Washington), and California State University, Fullerton (CSUF). The overall goal of this 3-year (2004–2007) study was to explore the environmental influences on tobacco use in AAPI communities, and the partnership between the CBOs and the university formed as a result of preexisting relationships with ethnically and economically diverse AAPI populations, a shared vision and goals of action-oriented work, and the desire to empower AAPI youth in tobacco control efforts. The demographic characteristics of the four geographic areas for the local CBOs are

shown in Table 1. Two of the cities were located in California and were composed of more than 50% ethnic-minority populations (with 15%–16% of households below the federal poverty line). In the third city located in Washington, ethnic-minority populations comprised 31.1% (with 6.6% below the federal poverty line).

The research partnership reflected the principles of CBPR, which emphasizes four major principles: shared participation, cooperative engagement, systems and capacity development, and community empowerment (Israel, Schulz, Parker, & Becker, 1998; Tanjasiri, Kagawa Singer, Nguyen, & Foo, 2002). The first principle, shared participation, entailed the meaningful involvement of AAPI youth from the participating communities in the process of study development and implementation. The second principle, cooperative engagement of community and university researchers in colearning processes, reflected from the outset by the shared responsibility of project management between APPEAL (a national nonprofit organization with the mission to promote health justice for Asian Americans and Pacific Islanders through advocacy and leadership development) and CSUF (a primarily teaching university) as co-principal investigators. The co-principal investigators held monthly meetings throughout the study period as well as yearly retreats with the other community partners to promote relationship building and study planning and implementation. The third principle, systems and capacity development, was reflected in intense trainings with community partners to promote understanding of the research study and of the design and implementation of data collection. Lastly, the trainings emphasized empowering processes that involve not only research but also action for community change. From the outset, all study partners made explicit that the intended outcome should be the empowerment of AAPI youth to identify and address their own community concerns. This article focuses on the CBPR processes and results involved in the Photovoice approach used in this study.

### Photovoice Approach

The Photovoice method represents a powerful process to capture community-level information through the eyes of its residents. Photovoice provides cameras and intensive training to community residents to document their own issues and concerns. Developed by Wang and Burris (1994), Photovoice is the innovative combination of several theoretical perspectives that emphasize community participation for social action, including empowerment education and documentary photography. Empowerment education facilitates community members to identify their needs and to become empowered through the processes of collecting information and questioning influences contributing to community conditions (Freire, 1987). Documentary photography has been used extensively to allow youth to capture their own perception of, and stories about, their worlds (Wang & Burris, 1994). These theoretical perspectives appreciate the value of participants defining and determining the subjects that are documented, with the emphasis on uncovering underlying root causes and identifying policy-oriented actions to address injustices.

Three specific aims of Photovoice are (a) to empower and engage community residents to freely share their concerns through taking photographs within their own communities, (b) to use the photographs as the focal point of group discussions and dialogue about community issues, and (c) to share their photographs with policy makers and other community residents to create positive community changes (Wang, 1999). Photovoice has grown in popularity and has been implemented by various communities to develop needs assessments, conduct evaluations, and catalyze awareness for policy change. Recent published works have addressed HIV/AIDS (Gosselink & Myllykangas, 2007; Short, 2006), cancer survivorship (Lopez, Eng, Randall-David, & Robinson, 2005) and women's health (LeClerc, Wells, Craig, & Wilson, 2002; Moffitt & Vollman, 2004; Wang & Burris, 1997), and involved underserved or economically disadvantaged youth (Foster-Fishman, Nowell, Deacon,

Nievar, & McCann, 2005; Stevens, 2006; Strack, Magill, & McDonagh, 2004; Streng et al., 2004; Wang & Redwood-Jones, 2001; Wilson, Minkler, DASHO, Wallerstein, & Martin, 2008) and older adult communities (Baker & Wang, 2006; LeClerc et al., 2002; Lockett, Willis, & Edwards, 2005). Thus, Photovoice recognizes participants' power and control over agenda setting, facilitates action and reflection concerning their surroundings, fosters the development of skills, and is an appealing way to inform policy makers' agendas and decisions.

### Study Processes

In the study's 1st year, the team conducted key informant interviews with community leaders and youth to identify potential sources of environmental influences on AAPI youth tobacco use and to understand how community, ethnicity, and geography relate to tobacco use in each population. The findings from these interviews underscored the importance of culture in tobacco promotion. For example, leaders identified how widespread smoking at cultural events can introduce youth to tobacco at an early age. Informants also spoke about the lack of resources for tobacco control work, and how AAPI youth-specific programs enhance ethnic identity and leadership skills for health promotion.

At the beginning of the 2nd year, the study team discussed findings and planned data collection methodologies that would best identify environmental influences and promote youth empowerment processes. Initially, the coinvestigators thought that Geographic Information Systems (GIS) mapping could be used to identify and locate occurrences of anti- and protobacco influences onto a map for each community. However, Photovoice was added to provide a way for youth to capture and display influences and their interpretations of why such influences existed and what could be done about them. After considerable discussion, all of the study partners agreed to use both GIS mapping and Photovoice methodology to capture the environmental influences in each of these communities. In the 2nd and 3rd study years, all assessment analysis activities were completed. The remainder of this article describes the processes and outcomes of the Photovoice component.

### Youth Recruitment

Each of the four local community-based agencies (APPS, GCN, FIGH, and WAPIFASA) worked with youth on leadership development and prevention programs. These youth, ages 14 to 18 years, were recruited by each agency to participate in the study, to attend a 2-day training, take community photographs, and write narratives on the link between the photographs and their personal and/or community's health. The youth leaders were generally interested in becoming involved in their community, and thus predisposed to make the commitment to participate in Photovoice (Foster-Fishman et al., 2005). All youth who participated in Photovoice were required to obtain parental consent and to provide youth assent using forms and a protocol approved by CSUF's institutional review board. Youth were compensated either monetarily or through other incentives such as food and transportation to the meetings, and events such as camping trips, ball games, and beach parties.

### Trainings

A series of 2-day trainings were conducted by study team staff with a total of 32 youth to provide them with the necessary skills to implement Photovoice in their communities. Training topics included definitions of community location and mapping, tobacco use and environmental or social justice issues, introduction to Photovoice, principles and ethics of photography, photo consent and safety, field practice using digital cameras, and group discussion and reflection about the Photovoice process and outcomes. The training began with an introduction to community mapping and asked youth to depict important locations in

their communities using drawings, which were used to open a discussion on the environmental influences of communities (such as gentrification, safety, or transportation) on residents' health. Youth were asked to answer questions regarding the most pressing needs in their communities and how these issues may influence smoking, as well as the strengths in their communities and how the strengths may prevent smoking. Next, participants viewed a PowerPoint presentation about the tobacco industry's targeting of youth and AAPIs, which led to a discussion about tobacco as a social justice issue and the role of the tobacco industry in influencing a community's environment to promote smoking.

Next, Photovoice was introduced as a way for the youth to document characteristics of and concerns about their community based on the themes of pro- and antitobacco environmental influences. The trainers showed how youth photographs can influence policy makers to devote increased resources and improvements in their own communities (Strack et al., 2004). The participants were introduced to photography basics (such as composition, aperture, shutter speed, and lighting) and given digital cameras to experiment with these techniques. The next interactive exercise was a Photovoice "scavenger hunt," which allotted 1 hr for youth to locate and photograph different environmental influences on tobacco use. This activity was followed by a debrief discussion on the findings, uploading and review of the photographs, and discussion about their thoughts on the meanings of the images. Lastly, the Photovoice "SHOWeD" mnemonic was used to facilitate youth through this analytic process by asking: What do you *See* here? What is really *H*appening? How does this relate to *O*ur lives? *W*hy does this problem or strength exist? What can we *D*o about it? (Wang, 1999; Wang, Morrel-Samuels, Hutchison, Bell, & Pestronk, 2004). The training concluded with an informal follow-up to answer questions and to clarify protocols and processes.

Follow-up sessions were conducted at each agency after the youth completed taking pictures in their communities to review the photographs, have the youth select and then write narrative descriptions of the photos using the SHOWeD method, and promote dialogue among the youth participants to identify themes in the photos. Throughout all of the training sessions, study staff took field notes about the processes and outcomes of each training component. The youth participants also completed a written evaluation of satisfaction with the session topics, discussions, and skills-building exercises. After conclusion of the trainings, Photovoice data collection proceeded over an approximately 5-month period, with implementation at each separate CBO lasting about 2 months.

### Equipment and Supplies

Four Canon PowerShot A610 digital cameras were purchased (at a cost of approximately \$215 each), each with an additional 512 MB memory card (at a cost of approximately \$50 each). For the training sessions, participants were given folders containing a training agenda, parental consent and youth assent forms, photo release forms, Photovoice log form matrix with instructions on how to fill out the form, an outline of photography ethics and Photovoice guidelines, an outline of principles of photography, and a sample packet of another Photovoice project done with youth. Agency staff was given shipping materials to return completed forms and photographs for compilation and analysis.

### Data Management and Analyses

All Photovoice equipment and data collection were maintained by youth and CBO staff at each organizational agency, with copies forwarded to study staff for further analyses. Photos were stored as image files on CDs, while text-based data were maintained in electronic word processing files. Study staff collected process data throughout the Photovoice experience, including process log forms (completed by the youth) documenting photography activities (such as date, place, image, and whether it was a positive or negative influence on smoking

for youth), field notes from training sessions, youth surveys evaluating each session, and youth input on important themes that emerged from the SHOWeD photo analyses (which occurred in the follow-up training sessions).

After all photos and SHOWeD narratives were completed by each site, they were examined by the study academic staff to identify common themes reflective of the youths' concerns. Thematic coding was done by two staff independently and then shared to discuss and resolve any disagreements. Extensive field notes were also taken by study staff throughout the training and implementation processes to document unforeseen challenges, to gather evaluative feedback from youth participants, and to capture the nature of group discussions and debriefs. These notes were reviewed by study staff for common themes and unique circumstances that provide context to the Photovoice processes and outcomes.

## RESULTS

### Photovoice Images

A total of 32 youth from four participating community agencies were involved in the Photovoice trainings and data collection. Approximately half of the Photovoice youth participants were male (Table 2). Half were Southeast Asian (including Cambodian, Vietnamese, Mien, and Lao), one quarter other Asian (Chinese and Filipino), and the remainder Pacific Islander (Chamorro) or other. Approximately 50% were 17 to 18 years old, with the remainder 16 and younger. An average of 8 youth participated from each site.

Youth at the four sites took 168 photographs of their communities and selected 37 photos to analyze using the SHOWeD method. Study staff facilitated youth in the development of their personal narratives for each picture. After all the narratives were completed, staff read and coded six major common themes (shown in Table 3): tobacco company strategies targeting AAPI youth, pervasiveness of tobacco company advertisement in AAPI communities, physical characteristics of distressed communities, making money off of the community, community poverty, and community violence. The first three themes were found in photographs taken in all four communities. For example, Figure 1 depicts a cigarette advertisement in a liquor store that uses a contemporary hip hop group to promote cigarettes to ethnically diverse youth. Figures 2 and 3 are store-fronts of smoke shops that illustrate tobacco company efforts to advertise in and profit from residents in low-income communities.

Many photographs taken by youth, however, were less specific to tobacco advertising and promotion and more reflective of community-wide disparities. For instance, Figure 4 is a back alley that represents widespread urban decay and youth disempowerment. Poverty was prevalent in many of the participating communities, and this was clear to the youth participants when a homeless man approached the study youth for a cigarette and seemed to embody the hopeless feeling of residents. As the youth participants explained,

The first thing I noticed was that this man is smoking a cigarette. But what's really happening is that he had nothing else to do in his life except smoke cigarettes. He asked us for money for a cigarette. This relates to my life because we all have to struggle to get things, this man struggled to get a cigarette, he had to beg us because he was addicted and he was craving it. This exists because our community has so much poverty. Richmond is a poor place, many people have to struggle to get what they want. The things we can do to help is keep people off the street and help keep our community from poverty.

Figure 5 (broken window at a local high school) reminded the youth of how poverty and violence touch their daily lives.

### Impact of Photovoice Processes on Youth Participants

Youth at all four participating CBOs indicated that they enjoyed the Photovoice experience as it enhanced what they perceived to be valuable research-related skills, could be used without any prior in-depth knowledge of tobacco, enabled immediate feedback (i.e., viewing the pictures), and involved a process that was easy to understand and implement. Indeed, access to visual programs (such as Google Earth) and to cell phone digital cameras for the youth was pervasive, and it took much less time than expected by study staff to train youth on the environmental perspective and unique features of the cameras used in this study. In comparison, youth shared many aspects of the process that were relatively difficult or challenging to implement, including coordinating schedules for youth teams to take pictures, entering private businesses in the community, and the desire and need for adult accompaniment to tour their communities and approach human subjects to photograph (particularly to obtain signed photo consent forms).

### Potential of Photovoice to Motivate Community Change

At the outset of the Photovoice effort, the study team sought to ensure data dissemination to policy and other decision makers to improve local tobacco control efforts. After the conclusion of data collection, the study staff compiled the Photovoice information and presented the findings at a meeting of tobacco control advocates on February 1 to 2, 2007. The meeting was convened by APPEAL with the goals of sharing models of community involvement developed by the different projects and obtaining feedback on the relative strengths and weaknesses of various processes and outcomes. The latter goal involved having youth coordinators describe their experience with Photovoice and share initial results from the collaborative research project on environmental influences of tobacco on AAPI youth. One example of a successful result was a presentation by youth coordinators to representatives of their city council in support of a law requiring licensing of all tobacco vendors—a proposal that passed and was enacted in 2008. Thus, the meeting provided a forum to share the benefits and challenges of CBPR, as well as opportunities and strategies for addressing tobacco disparities in AAPI communities.

In December 2007, APPEAL convened another gathering to include the AAPI youth, involved in collecting data for this CBPR project, from each study community to (a) give youth an opportunity to meet others from communities outside their own (which was specifically requested by all of the partnering CBOs) and (b) further discuss strategies for data dissemination. A series of team-building activities were facilitated to promote networking and collaboration among the youth followed by skills building sessions on data dissemination (through oral presentation, video, or Web-based formats). For example, a presentation about the benefits of creating a website to disseminate data results turned into a discussion about how to use [www.myspace.com](http://www.myspace.com) to share their work with other youth. Each youth group was asked to develop a plan, give information on the steps involved in each media, develop a piece (on tobacco or other issue), and to present to the larger group.

## DISCUSSION AND IMPLICATIONS FOR PUBLIC HEALTH PRACTICE

Tobacco control efforts in ethnically diverse communities must first assess and then address pervasive environmental influences to prevent initiation among youth and other vulnerable populations. The use of Photovoice enabled youth in our study to capture what they perceived to be environmental influences on youth tobacco use in their communities, describe images that influence tobacco use, and recommend actions that address both individual- and community-level factors. Although two of the six themes were directly related to tobacco advertising and promotion, the other four reflected root causes prevalent in economically depressed communities, which have been incorporated into very few youth



tobacco research and/or intervention efforts (Burgess Dowdell, 2006; Nowlin & Colder, 2007). We believe future youth-oriented tobacco control efforts should at least equip participants with skills to identify, if not also address, such influences in their local communities.

Aside from the outcomes of Photovoice, we concur with the growing number of studies that have used the process to foster youth empowerment during an important life developmental stage (Strack et al., 2004). We found that youth had an immediate affinity for the Photovoice process (learning basics of photography, taking pictures of their communities, writing descriptive narratives). As a needs assessment tool, Photovoice surfaces unique perspectives grounded in the emic understanding of the youth and their surroundings. But in and of itself, Photovoice also has the potential to raise false hopes for change among participants unless it is tied to successful policy or other public outcomes (Strack et al., 2004). In our experience, Photovoice must be followed up with opportunities for youth sharing and engagement. For instance, in one of our sites youth had the opportunity to share their pictures with local policy makers to support the successful passage of a tobacco vendor licensing law. Although this opportunistic experience has been disseminated to our other community sites for potential replications, we also hope to build clearer policy and other (e.g., media) outcomes into future research and intervention studies (Wang et al., 2004).

Despite positive feelings about the processes and outcomes, we also experienced a number of challenges. First, youth in the first set of trainings reported that the trainings were overly lengthy and didactic. As the trainings proceeded at each community site, modifications were made to incorporate more interactive and reflective exercises. The final curriculum compiled has been shared with other researchers and organizations. Another concern expressed by all study partners was the need to ensure youths' safety while collecting data in the field. Although all youth collected data in pairs, many of the community locations were known to be unsafe even in the daytime. Given the physical nature of the Photovoice methodology, such a challenge may be most acute in impoverished communities, and future researchers and practitioners should find creative ways to promote creativity while minimizing risk. The study findings may also be biased by the relatively small number of communities ( $n = 4$ ) and youth ( $n = 32$ ) who participated, as well as the limited number of photographs ( $n = 37$ ) generated. Lastly, policy advocacy efforts may have been hampered by the diversity of communities we worked with, and the difficulty of predefining policy change targets in each study site. As discussed by Wang and colleagues (2004), involvement of policy makers at the outset of a project like ours could have facilitated the diffusion of study findings to changing local policies or organizational practices.

Despite these limitations, Photovoice clearly has the potential to not only tap into the creative imaginations of youth but also capture tobacco and other health risk realities that can be translated to impacts on youth empowerment and community change. We hope that future studies build on our experiences by replicating Photovoice efforts in other diverse environments, with the long-term goal of identifying and mobilizing against environmental-level influences relevant to youth and community tobacco control.

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## References

- Appleyard J, Messeri P, Haviland ML. Smoking among Asian American and Hawaiian/Pacific Islander youth: Data from the 2000 National Youth Tobacco Survey. *Asian American and Pacific Islander Journal of Health*. 2001; 8:5–14. [PubMed: 11720409]
- Asian Pacific American Legal Center. *The diverse face of Asians and Pacific Islanders in California*. Los Angeles, CA: Author; 2005.
- Asian and Pacific Islander American Health Forum. *Asian American, Native Hawaiian and Pacific Islander population demographics: 2006 data*. San Francisco, CA: Author; 2009.
- Bader, K. *San Francisco billboard survey: Race, tobacco and alcohol*. San Francisco, CA: California Rural Legal Assistance; 1993.
- Baker TA, Wang CC. Photovoice: Use of a participatory action research method to explore the chronic pain experience in older adults. *Qualitative Health Research*. 2006; 16:1405–1413. [PubMed: 17079801]
- Barnett TA, Gauvin L, Lambert M, O'Loughlin J, Paradis G, McGrath JJ. The influence of school smoking policies on student tobacco use. *Archives of Pediatrics & Adolescent Medicine*. 2007; 161(9):842–848. [PubMed: 17768283]
- Burgess Dowdell E. Alcohol use, smoking, and feeling unsafe: Health risk behaviors of two urban seventh grade classes. *Issues in Comprehensive Pediatric Nursing*. 2006; 29:157–171. [PubMed: 16923679]
- Centers for Disease Control and Prevention. Cigarette use among high school students—United States, 1991–2005. *MMWR Morbidity and Mortality Report*. 2006; 55(26):724–726.
- Cummings KM, Fong GT, Borland R. Environmental influences on tobacco use: Evidence from societal and community influences on tobacco use and dependence. *Annual Review of Clinical Psychology*. 2009; 5:433–458.
- Foster-Fishman P, Nowell B, Deacon Z, Nievar MA, McCann P. Using methods that matter: The impact of reflection, dialogue, and voice. *American Journal of Community Psychology*. 2005; 36:275–291. [PubMed: 16389500]
- Freire, P. *Education for critical consciousness*. New York, NY: Continuum; 1987.
- Gosselink CA, Myllykangas SA. The leisure experiences of older US women living with HIV/AIDS. *Health Care for Women International*. 2007; 28:3–20. [PubMed: 17148106]
- Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health*. 1998; 19:173–202.
- LeClerc CM, Wells DL, Craig D, Wilson JL. Falling short of the mark: Tales of life after hospital discharge. *Clinical Nursing Research*. 2002; 11:242–263. discussion 264–266. [PubMed: 12180639]
- Lew R, Tanjasiri SP. Slowing the epidemic of tobacco use among Asian Americans and Pacific Islanders. *American Journal of Public Health*. 2003; 93:764–768. [PubMed: 12721139]
- Lockett D, Willis A, Edwards N. Through seniors' eyes: An exploratory qualitative study to identify environmental barriers to and facilitators of walking. *Canadian Journal of Nursing Research*. 2005; 37(3):48–65. [PubMed: 16268089]
- Lopez ED, Eng E, Randall-David E, Robinson N. Quality-of-life concerns of African American breast cancer survivors within rural North Carolina: Blending the techniques of Photovoice and grounded theory. *Qualitative Health Research*. 2005; 15:99–115. [PubMed: 15574718]
- Moffitt P, Vollman AR. Photovoice: Picturing the health of Aboriginal women in a remote northern community. *Canadian Journal of Nursing Research*. 2004; 36:189–201. [PubMed: 15739944]
- Muggli ME, Pollay RW, Lew R, Joseph AM. Targeting of Asian Americans and Pacific Islanders by the tobacco industry: Results from the Minnesota Tobacco Document Depository. *Tobacco Control*. 2002; 11:201–209. [PubMed: 12198269]

- Novak SP, Reardon SF, Raudenbush SW, Buka SL. Retail tobacco outlet density and youth cigarette smoking: A propensity-modeling approach. *American Journal of Public Health*. 2006; 96:670–676. [PubMed: 16507726]
- Nowlin PR, Colder CR. The role of ethnicity and neighborhood poverty on the relationship between parenting and adolescent cigarette use. *Nicotine & Tobacco Research*. 2007; 9:545–556. [PubMed: 17454711]
- Short RV. New ways of preventing HIV infection: Thinking simply, simply thinking. *Philosophical Transactions of the Royal Society of London: Series B, Biological Sciences*. 2006; 361(1469): 811–820.
- Stevens CA. Being healthy: Voices of adolescent women who are parenting. *Journal of Specialists in Pediatric Nursing*. 2006; 11:28–40.
- Strack RW, Magill C, McDonagh K. Engaging youth through Photovoice. *Health Promotion Practice*. 2004; 5:49–58. [PubMed: 14965435]
- Streng JM, Rhodes SD, Ayala GX, Eng E, Arceo R, Phipps S. Realidad Latina: Latino adolescents, their school, and a university use Photovoice to examine and address the influence of immigration. *Journal of Interprofessional Care*. 2004; 18:403–415. [PubMed: 15801555]
- Tanasiri SP, Kagawa Singer ML, Nguyen TUN, Foo MA. Collaborative research as an essential component for addressing cancer disparities among Southeast Asian and Pacific Islander women. *Health Promotion Practice*. 2002; 3:144–154.
- Wang C, Burris MA. Empowerment through photo novella: Portraits of participation. *Health Education Quarterly*. 1994; 21:171–186. [PubMed: 8021146]
- Wang C, Burris MA. Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education & Behavior*. 1997; 24:369–387. [PubMed: 9158980]
- Wang CC. Photovoice: A participatory action research strategy applied to women’s health. *Journal of Women’s Health*. 1999; 8:185–192.
- Wang CC, Morrel-Samuels S, Hutchison PM, Bell L, Pestronk RM. Flint Photovoice: Community building among youths, adults, and policymakers. *American Journal of Public Health*. 2004; 94:911–913. [PubMed: 15249287]
- Wang CC, Redwood-Jones YA. Photovoice ethics: Perspectives from Flint Photovoice. *Health Education & Behavior*. 2001; 28:560–572. [PubMed: 11575686]
- Weiss JW, Cen S, Schuster DV, Unger JB, Johnson CA, Mouttapa M, Cruz TB. Longitudinal effects of pro-tobacco and anti-tobacco messages on adolescent smoking susceptibility. *Nicotine & Tobacco Research*. 2006; 8:455–465. [PubMed: 16801303]
- Wellman RJ, Sugarman DB, DiFranza JR, Winickoff JP. The extent to which tobacco marketing and tobacco use in films contribute to children’s use of tobacco: A meta-analysis. *Archives of Pediatrics & Adolescent Medicine*. 2006; 160:1285–1296. [PubMed: 17146027]
- Wildley MB, Young RL, Elder JP, De Moor C, Wolf KR, Fiske KE, Sharp E. Cigarette point-of-sale advertising in ethnic neighborhoods in San Diego, California. *Health Values*. 1992; 16:23.
- Wilson N, Minkler M, Dasho S, Wallerstein N, Martin AC. Getting to social action: The Youth Empowerment Strategies (YES!) project. *Health Promotion Practice*. 2008; 9:395–403. [PubMed: 16803932]



**FIGURE 1. Theme of Targeting Youth**

NOTE (as written by the youth participants): The ad for Kool cigarettes has a singing group called the Roots. Roots is basically supporting smoking. They're Kool's spokespeople. I took the picture because cigarette brands are using famous people to influence their audience. This photo concerns me because if more famous people are becoming spokespeople for cigarette brands then it will get the attention of younger audiences like teenagers and even younger. Also, teenagers would want to be like the celebrity that they like.



**FIGURE 2. Theme of Tobacco Advertisement**

NOTE (as written by the youth participants): The photo is of a shop that is dedicated only to tobacco and tobacco products. Even if women go to the beauty supply shop you still have to pass the cigarette shop. Most of the ads in the shop were at eye level for little kids. Even if teenagers were to go to the beauty salon they will continuously see all of the brands.



**FIGURE 3. Theme of Making Money off of the Community**

NOTE (as written by the youth participants): Here you can see part of Richmond stores trying to make money by selling smokes and having ads to influence people to smoke. By selling smokes that slowly kill us while they make money we should reduce smoke shops and ads.



**FIGURE 4. Theme of Community Appearance**

NOTE (as written by the youth participants): Driving by the ditch, people can see all the graffiti and all the litter. The graffiti is in a neighborhood and its gang-related. All the litter and graffiti make Long Beach look bad. We should make a place, so they can tag and start a gang prevention program. We should pick up trash and paint out the graffiti.



**FIGURE 5. Theme of Community Violence**

NOTE (as written by the youth participants): I can see that the school has been shot at. The windows have bullet holes. I can tell that this school wouldn't be good to go to and it isn't in a nice neighborhood. Rainier valley is my neighborhood and seeing bullet holes in a window at a nearby school isn't a good sign for students like me.... We can have more security to watch out in the neighborhoods.



**TABLE 1**

## Demographics of Photovoice Communities

	City 1	City 2	City 3
Population size	463,956	96,648	536,946
Ethnicity, %			
White	43.7	34.9	68.9
Hispanic	39.7	33.8	6.3
African American	13.1	28.8	8.2
Asian	14.2	14.6	14.4
Pacific Islander	0.5	0.0	0.3
American Indian/Native Alaskan	0.5	0.1	1.2
Other	24.3	19.0	3.2
Households Under FPL	16.4	15.2	6.6

NOTE: FPL = federal poverty line.

**TABLE 2**

## Demographics of Photovoice Youth Participants

	<b>n (%)</b>
Gender	
Male	17 (53.1)
Female	15 (46.9)
Ethnicity	
Asian	8 (25.0)
Southeast Asian	16 (50.0)
Pacific Islander	6 (18.8)
Other	2 (6.2)
Age	
13–14	3 (9.4)
15–16	14 (43.8)
17–18	15 (46.8)

**TABLE 3**

## Environmental Themes From Photovoice Images and Narratives

	No. (%) of Communities (n = 4)	No. (%) of Photographs (n = 37)
Advertisements targeting teens	4 (100)	14 (37.8)
Cigarette ads and sales in the community	4 (100)	12 (32.4)
Appearance of the community	4 (100)	7 (18.9)
Making money off of the community	3 (75)	5 (13.5)
Poverty in community	2 (50)	2 ( 5.4)
Violence	1 (25)	4 (10.8)

NOTE: Percentages exceed 100% because several pictures represented more than one theme.