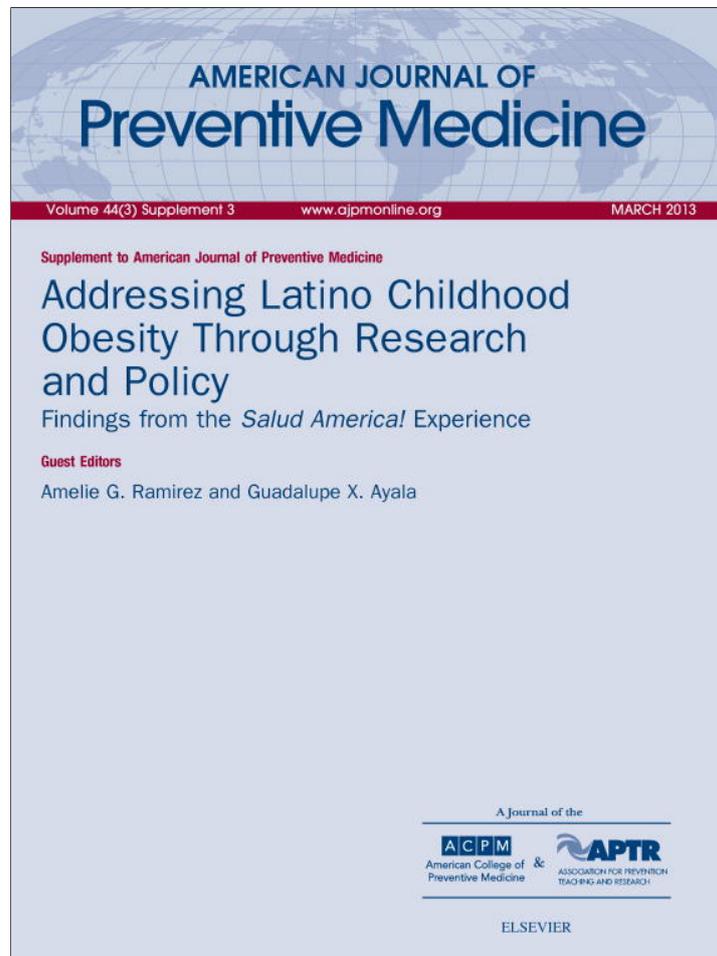


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Combining Photovoice and Focus Groups Engaging Latina Teens in Community Assessment

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Background: Latino adolescents, especially girls, experience higher obesity rates and are more likely to be physically unfit than non-Latino white peers. Out-of-school programs to increase physical activity and fitness in older Latino teens are critical, but sustained engagement is challenging.

Purpose: This study combined a community-based participatory research methodology, Photovoice, with focus groups to engage Latina teens and their parents in identifying barriers to physical activity and initiating policy change actions to address them. The study investigates the effectiveness of applying Photovoice as both an evaluation tool and a leadership/advocacy intervention in a community-based obesity prevention program.

Design: Focus group data were collected between July 2009 and October 2010 and analyzed between November 2010 and July 2011. Five focus groups were held with adults ($n=41$: 95% Latino) and four with teens ($n=36$: 81% Latino, 10% non-Hispanic white, 9% African-American).

Setting/participants: All participants (19 teens, six adults) were Latino. Spanish-speaking staff of a community-based agency, program staff, high school guidance counselors, and a job development agency recruited participants. Teens aged 14–19 years enrolled in New Britain CT, high schools, and their parents were eligible.

Main outcome measures: Data from Photovoice workshops (three with teens, two with parent-teen dyads) were collected and concurrently analyzed between July 2009 and August 2011.

Results: Teens criticized school-based physical exercise programs in favor of out-of-school exercise and career advice. Parental restrictions and work, transportation, and safety issues were cited as barriers to afterschool physical activity programs.

Conclusions: Photovoice can empower teens and parents to address exercise barriers by promoting advocacy that leads to policy change (e.g., an out-of-school physical education option).

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Introduction

Latinos, one of the fastest-growing population groups,¹ experience higher rates of obesity and its serious physical and mental health consequences than their non-Latino white peers.^{2–6} They also are more likely to be sedentary and physically unfit.^{7–15} A local survey of 515 high school students in the target community (New Britain CT) found that Latinas had significantly higher rates of obesity, lower levels of physical activity, and a greater

likelihood of receiving a failing grade in physical education than their African-American or non-Latino white peers (SM, unpublished observations, 2008).

Programs and policies to increase physical activity and fitness for Latino teens are critical,¹⁶ particularly as teens enter high school, a time when engagement in physical exercise in and out of school declines.^{17–19} Maintaining sustained engagement of high school teens aged 14–19 years in afterschool activities (including physical activity) is challenging.^{20,21} However, giving them leadership opportunities and a “voice” in decision making may substantially increase their retention.²²

Photovoice is a community-based participatory research (CBPR) methodology that has been used successfully to give teens (including Latina adolescents)²³ leadership roles in assessing their environment (including barriers and facilitators of access to healthy food and

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physical activity)^{24,25} and advocating for positive change.^{26–29} Photovoice (1) enables people to use photography to document and reflect on their community's strengths and concerns; (2) promotes critical dialogue and knowledge about personal and community issues through large and small group discussions of photographs; and (3) links community members to policymakers to promote change.^{30–36} The present study used Photovoice in combination with traditional focus groups to engage Latina teens and their parents in assessing barriers to physical activity in and out of school and, in partnership with health providers and policymakers, initiating policy actions to address identified barriers. In addition to expanding the body of knowledge on barriers to physical activity among Latina teens, it advances previous work on Photovoice by investigating its application as both a qualitative evaluation tool and a leadership/advocacy intervention in a community-based obesity prevention program.^{37–40}

Methods

This study was a midcourse evaluation of Healthy Tomorrows for New Britain Teens (HT), an afterschool obesity prevention program of the Community Health Center (CHC), Inc., a system of 13 federally qualified health centers in Connecticut. CHC of New Britain serves some 11,000 predominately Latino patients annually. The HT program, funded by the Maternal Child Health Bureau and American Academy of Pediatrics from 2007 to 2012, offered a “portfolio” of activities (nutritional counseling, physical activity, and leadership development) to high school-age girls (predominately low-income Latinas of Puerto Rican descent). HT was a partnership with the YWCA, New Britain High School (NBHS), a vocational technical high school, and the Spanish Speaking Center (SSC), a grassroots agency serving Latinos.

Focus group data were collected from July 2009 to October 2010 and analyzed between November 2010 and July 2011. Data from Photovoice workshops were collected and analyzed concurrently through feedback from participants between July 2009 and August 2011. Informed consent was obtained from all participants; parental consent was obtained for teen participants aged <18 years.

Design

The qualitative evaluation consisted of a series of focus groups supplemented by Photovoice sessions with Latina teens and parents. The focus groups were held over a 16-month period between July 2009 and October 2010. Photovoice projects were conducted from July 2009 (when it was added to the HT program portfolio) through August 2011. The Photovoice sessions were a way of extracting more nuanced, richer insights to complement and clarify findings from the focus group discussions.

Setting and Research Participants

Nine focus groups were conducted, four with adolescent girls and five with parents. HT staff and guidance counselors recruited participants for the teen focus groups ($n=36$: 81% Latino, 10% non-Hispanic white, 9% African-American). Groups included 6–10 adolescents and were conducted at the YWCA, CHC, and the vocational high school.

Although some teens in each group knew each other, efforts were made to not recruit large groups of friends. Spanish-speaking/bicultural staff of the SSC recruited participants in the adult focus groups ($n=41$: 95% Latino); sessions were held at the center.

Five Photovoice workshops were conducted: three with teens (summer of 2009, 2010, and 2011) and two with parent-teen dyads (winter of 2009 and 2010). All participants (19 teens and six adults) were Latino. Teen workshops were held at the CHC with participants recruited by a job development agency as part of a summer work-study program for low-income students. Parent/teen workshops were held at the SSC with participants recruited by SSC staff. Although recruitment methods and workshop sites differed, all participants were comparable in terms of race/ethnicity, income, and other characteristics (i.e., all were low-income Latino residents of New Britain; all teens were enrolled in one of the two city high schools).

Procedure

Focus groups (approximately 90 minutes) were led by two facilitators, including at least one PhD- or master's-level psychologist with expertise in adolescent development and group facilitation. At least one facilitator was also bilingual/bicultural (Spanish). Adult focus groups were conducted in Spanish, teen groups in English. An evaluation consultant from the University of Connecticut Department of Psychology developed a focus group guide that elicited feedback on barriers to participation in physical activity; awareness of physical activity resources; and views on how to improve older teens' access to and engagement in out-of-school programs (SM, unpublished interview guide, 2008).

Similar questions were asked of parents and youth, with appropriate changes in language for age and role. Primary questions are listed in Table 1. All sessions were audio-recorded. Teen and adult participants received a \$10 gift card, and adult groups that were held during the early afternoon also included lunch. Procedures for the focus groups were approved by the University of Connecticut IRB.

The Photovoice curriculum consisted of six to eight 2-hour sessions over an 8-week period.⁴¹ The three teen workshops were facilitated by HT staff; teens received \$1000 stipends from the job training agency for their 8-week assignment. SSC staff co-facilitated parent/teen workshops and provided translations. Participants received \$10 gift cards. In the first two sessions, facilitators provided an overview of Photovoice and emphasized participants' roles as co-researchers. Participants helped develop three framing questions to guide taking photos. Physical activity questions focused on barriers and facilitators of access. An open-ended question allowed participants to explore issues of interest (four groups focused on stress; one on what makes teens happy or sad). Participants used disposable cameras to take some 27 photos answering the framing questions over a period of 1–2 weeks.

In Sessions 3 and 4, participants wrote and presented to the group their reflections on six of their own photos, explaining why they chose each one, what it meant to them personally, and how it related to broader family and community concerns. In Sessions 5 and 6, the group engaged in dialogue with each other, the facilitators, and invited guests. (Teen groups were conducted in English; parent/teen groups in both English and Spanish with bilingual co-facilitators providing translation as needed.) Participants identified themes that emerged from the dialogue process and selected six photos that represented a collective “narrative.” These photos became the basis for an action agenda and formal and informal presentations (prepared in Sessions 7 and 8).

Table 1. Core focus group questions

1. What do you consider the biggest health issue for girls your age?
2. (If weight/obesity not spontaneously brought up) Are girls your age concerned with obesity/weight as a health issue?
3. What are some of the reasons you think obesity rates are so high in adolescents?
4. What keeps adolescent girls from exercising/eating healthy?
5. What types of things do you think parents can do to help adolescents get healthier in terms of eating or exercise?
6. What things could doctors, school health clinic, or CHC do to help get adolescents healthier?
7. Imagine you were in charge of the town. What types of programs do you think adolescents would participate in? Take leadership role in?
8. What types of HT activities have you participated in? What did you enjoy most?
9. What are some of the things that you think get in the way of adolescents participating in HT or might get in the way of the types of activities mentioned before?
10. What do you think are the best ways of communicating about HT or similar programs?

Note: Parallel questions were asked of parents, but with wording changed slightly to reflect different roles.

CHC, Community Health Center; HT, Healthy Tomorrows for New Britain Teens

Data Analysis

Focus group sessions were audio-recorded and transcribed verbatim shortly after each session. Focus groups in Spanish were transcribed into Spanish first and then translated by two bilingual/bicultural research assistants. Transcripts were then reviewed by six members of the research team who independently extracted themes related to the focus of the evaluation. In extracting themes, the team considered meanings of key words, their context, internal agreement or shifts in opinion, and whether or not opinions were grounded in particular experiences. Themes were developed by consensus from joint discussions by the research team (see Table 2 for a list of themes).^{42,43}

Each focus group transcript was reviewed to highlight examples of each theme. Agreement in quotes reflecting themes between coders was high, with the exception of personal relevance, with percentage agreement of examples within each theme greater than 80% (weighted kappas ranging from 0.50 to 0.70). In cases where a quote reflecting a theme was identified at least twice, this quote was then used as an example highlighted in a written report. With the integration of Photovoice in the evaluation design, data collection became an iterative process: Themes that surfaced in focus groups informed Photovoice activities. Reports of findings, with key themes and corroborating quotes, were shared with HT staff and partners to facilitate programmatic improvements (SM, unpublished observations, 2010).

Results

Focus group and Photovoice findings are summarized below in two topic areas: barriers and facilitators of engagement in physical activity among Latina teens, and effectiveness of Photovoice. An analysis of the source of quotes (focus group or Photovoice) and detailed findings are presented in Tables 2 and 3, respectively.

Barriers/Facilitators of Engagement in Physical Activity

School-based barriers. The majority of teens were critical of both the structure and content of in-school physical education (PE) classes. This attitude was stronger among girls at NBHS (where PE is required only in 9th grade) than among girls in the vocational high school where PE is required all 4 years. The main reason for nonparticipation was refusal to change clothes, followed by worries about appearance (e.g., getting sweaty and messing up hair); self-consciousness relating to exercising in front of boys; reluctance to change early in the day; and disgust at the poor condition of locker rooms.

Many girls cited boredom with traditional sports-oriented PE activities (e.g., being forced to play the same sport every day for several weeks). Suggestions for improving PE included having the option of more diverse, non-competitive activities (e.g., yoga, walking rather than running) and dancing or “anything related to music.” Parents and some teens thought that separating PE classes by gender or scheduling them at the end of the day would be helpful.

The option of an out-of-school program offered at the YWCA that would satisfy high school PE credit was supported by NBHS teens “because you can work out and get all sweaty and you don’t have boys all looking at you and stuff.” Parents agreed, recommending that it be mandatory “like a credit, like math—because kids don’t like to follow rules.”

Out-of-school barriers. Jobs, school work, caring for younger siblings and family members, and, in many cases, caring for their own child limited teens’ ability to engage in after-school physical activity programs. Work took priority over exercise and few teens saw the possibility of integrating both into their schedule: “Right now I don’t have a job so I can come (to the YWCA). But if I could get a job then I probably wouldn’t come.”

Latino parents restricted girls’ activity more than boys’ due to cultural attitudes about gender roles. (“[My daughter] can’t go out and do the stuff that boys do. No, that’s not acceptable.”) Fears about the teen pregnancy and about safety and gang violence were among the reasons for parental restrictions. The issue of strict parental rules was a frequent topic among teens, many of whom identified the restrictions as cultural barriers that might limit their

Table 2. Photovoice/focus group themes and supporting quotes

Theme and quotes
CULTURE/RACISM
Focus group
In our countries we walk around everywhere, we Latinos like to move around. But here everyone stays inside and we keep our kids inside because it's not safe or it's too cold. (parent)
White girls can do anything—their parents don't put any rules on them and just let them have their way. It's not like that in Puerto Rican families.
Photovoice
I think we don't always get to say what things are like for us. People may think everything is the same no matter where you are from, or they. It is a good way to show what goes on inside a home or inside a family. (parent)
What I like is talking with other families. We get the opportunity to spend time with each other and talk about important things. There isn't always time or a place to do that. (parent)
GENDER
Focus group
I put limitations on my daughter. She can't go out and do the stuff that boys do. No, that's not acceptable. (parent)
It's like you would only feel comfortable doing something with someone from your group probably, (your) posse. I think a lot of people aren't going to go somewhere new when they don't know the people there.
AVAILABILITY/AWARENESS
Focus group
Mostly we hang out at home or at people's houses, or maybe go to a movie. That is all there is to do in New Britain.
I think that would be a good idea, because you could come here for other things at the same time. Also, sometimes you don't really want to go into some place like Planned Parenthood because of who might see you. (access to contraception at the YWCA)
It's like that with everything. You never learn about anything in our school unless somebody happens to tell you that.
COMPETING RESPONSIBILITIES
Focus group
Work kept me from coming (to the YWCA) sometimes. But right now I don't have a job so I can come. But if I could get a job then I probably wouldn't come.
TRANSPORTATION
Focus group
We walk to exercise our bodies, but we would like it better if there weren't any gangs to mess up our streets. (parent)
<i>(continued)</i>

Table 2. (continued)

Theme and quotes
BUILT ENVIRONMENT
Focus group
I've never really thought about that before. I guess if you lived in a place that really wasn't safe or right off the highway, then you couldn't really go out walking or running or anything. But there are other places you can go to like the Y that are not like that. So, maybe that's true for some people but not others. I think it depends on where you live.
Photovoice
In our neighborhood, we saw eyesores, such as bad-smelling dumpsters that make us unhappy. These discourage us to exercise in our neighborhood.
Our community is damaged by dirty things. People need to recycle and maybe the earth won't be contaminated. We should have trash cans that are for recycling, not like they do in school . . . they have recycling bins but they don't really recycle.
I took this picture of a fitness center because although it is a positive influence, it's more of a negative influence because there is no other way to get to it but to drive and that pollutes that air. The price also prevents people from going there because many people can't afford it.
I remember 2 years ago I used to go to this pool, now that it is closed there's no memories left to it. I remember jumping off the diving board with my friend and feeling the cold refreshing water . . . but now all I see is garbage and graffiti. What happened to . . . the days when Washington Park was alive and full of joy.
VOICE/ADVOCACY
Photovoice
It makes me sad because they turned two stores into one big package store where they could have made the store into something important and useful.
I took this picture to show everyone that we have a lot of abandoned buildings that our parents pay taxes on, that we can fix up and build more high school and other useful buildings.
If the pools do get opened, it will feel good, but aside from that, it feels good that we worked this hard and we let our voices be heard.
I think only two people, us two people, can make a big difference, in our community and in New Britain. I would have felt bad if I wouldn't have come . . . I would have worked this hard for nothing because I didn't get my voice heard. The next time I won't be as nervous. The first time is always hard but the next time will be better.
Dumpsters stink. I live there and I know it's a problem.

Note: All quotes are by teens, unless otherwise indicated.

exercise relative to other racial groups: “White girls can do anything—It's not like that in Puerto Rican families.”

Parents and teens agreed there was a lack of programs for teen girls in New Britain. (“Mostly we hang out at

Table 3. Midcourse evaluation of Healthy Tomorrows: findings and policy changes

Focus group/Photovoice responses	Policy actions
What are the barriers to consistent/sustained engagement in physical activity in school for Latina teens in New Britain High Schools?	
Structure of PE curriculum: PE required only in 9th grade (New Britain High School)	Separate gym classes for girls
Content: Boring, repetitive activities: few alternatives to traditional sports for non-athletes or teens with medical problems (e.g., yoga, walking)	Gym late in the day
Gender issues: girls self-conscious about boys looking at them; getting sweaty and messing hair up.	Initiate and sustain PE Credit Recovery (“Fit for Life”) course at YWCA allowing teens who fail in-school PE to recover credit
Racial issues: non-Hispanic whites more likely than Latinas to be athletes and engage in team sports	
Teen pregnancy (associated with dropping out of school or transferring to night school)	
What are the barriers to sustained/consistent engagement in physical activity in afterschool programs (e.g., Healthy Tomorrows)?	
Transportation (school/city bus routes inconvenient: safety; gang activity (parents don’t allow girls to walk or ride city buses)	Modify school bus routes to add stop at YWCA
Lack of awareness of activities and resources in the community	“Fit for Life”: collaboration among HT, YWCA, and high school
Preference for activities in one’s own social circle/cliq (teens)	Teen center with adult/older peer supervision (proposed)
Competing responsibilities for older teens (child care, jobs, school/sports)	Affordable day care expansion
Teen pregnancy (lack of affordable day care)	
What are the barriers to sustained/consistent engagement in physical activity in the community?	
Neighborhoods dirty and unsafe, graffiti/vandalism, garbage	Petition city council to reopen pools in two predominately Latino neighborhoods
Parks in Latino neighborhoods vandalized, gang and drug activity, facilities closed (pools)	Teen center (proposed)
Poor public transportation system (New Britain ranked at bottom of all Connecticut cities)	City or school should purchase vacant buildings and renovate them as smaller schools, daycare centers
Stigma attached to walking for recreation/transportation (sign of poverty, unemployment)	Enforce dumpster ordinances in public housing
Inclement weather (Puerto Rico “people walk everywhere” to destinations such as beach)	
Neighborhood decay, cultural isolation, and lack of social cohesion major cause of stress for teens and deterrent to exercise “People don’t take care of things”	
Older teens prefer programs that are career related or linked to school curriculum—not a “club”	
Is PV effective in mobilizing teens to advocate for healthier/more active communities?	
PV gives teens a “voice,” communicating to policy makers who value their input: “It felt good talking in front of people.”	

(continued on next page)

home or at people’s houses.”) In Photovoice sessions, teens expressed a strong interest in a “teen center” where multiple programs were offered.⁴⁴ Parents agreed that a center at the YWCA was acceptable as long as a trustworthy adult was in charge. Both adults and teens stressed that programs have tangible benefits for older teens, providing career information, satisfying course requirements, for example.

Recognizing that teen pregnancy is a “huge problem” in New Britain, almost all teens agreed that better access to contraception was needed. One teen noted that offering contraceptive services at the YWCA was a “good idea because you could come here for other things at the same time. Also, sometimes you don’t really want to go into some place like Planned Parenthood because of who might see you.” Many teens emphasized the influence of cliques (“doing something with someone from your posse”) on decisions about participation in the YWCA or other afterschool programs.

Awareness rather than availability may have a barrier in many cases. Despite efforts by the program team,

almost no parents in focus groups had heard of HT or confused it with another program. The lack of information was widespread: “It’s like that with everything. You never learn about anything in our school unless somebody happens to tell you that.”

Community Barriers. Transportation was inadequate according to most parents and teens, with school and city buses

only “going certain places,” not places where teens wanted or needed to go. Many parents prohibited their daughters from riding the bus because of the perception that it was unsafe. Walking—for transportation or family recreation—was common and had both positive (“we are together, so that is good”) and negative connotations because of fear of unsafe streets and gang activity (“... we would like it better if there weren’t any gangs to mess up our streets.” [Appendix A]).

In contrast, some teens in focus groups were vague about the relationship between the built environment and their ability to exercise: “I’ve never really thought about that before.”⁴⁵ Photovoice participants took multiple photos documenting neighborhood and city deterioration (garbage, graffiti, vacant buildings) and wrote reflections that explored the impact on their feelings and motivation to exercise: “In our neighborhood, we saw eyesores, such as bad smelling dumpsters that make us unhappy. These discourage us to exercise” (Appendix A).

Teens noted how the environment affected the world around them, not just themselves: “All you see around is people with cars polluting the world ... it is also bad for themselves.” They express both idealism (“people need to recycle”) and disappointment at what they see as adult hypocrisy (“they have recycling bins but don’t really recycle”) and their ineffectiveness at fixing problems. One teen was frustrated that a “masterpiece”—a mural painted on a house during a clean-up day—was turned into a “master dump” when it was covered in graffiti. Another balanced the positive influence of a fitness club (a place to exercise) with its negatives: driving to it “pollutes the air” and “many people can’t afford it.”

Teens took many photos of vacant buildings and consistently expressed the need to renovate or tear them down as well as disillusionment with the adult world’s failure to “fix them up and build more high schools or other useful buildings” (Appendix A).

Table 3. Midcourse evaluation of Healthy Tomorrows: findings and policy changes (continued)

Focus group/Photovoice responses	Policy actions
PV builds research skills (community/environmental assessment)	Integrate PV into the academic curriculum at New Britain High School (proposed)
PV allows isolated adults/teens to bond with each other and develop action agendas for change	
PV is feasible as a shared strategy for community-wide change	
PV is demanding/time intensive—not feasible as an afterschool voluntary program	
PV reinforces academic learning; can be integrated in high school curriculum (credit)	

Note: Boldface type in the second column indicates that a policy change was implemented or initiated. CHC, Community Health Center; HT, Healthy Tomorrows for New Britain Teens; PE, physical education; PV, Photovoice

Witnessing the abandonment and gradual decay of places where teens lived and played as children also has a negative impact. The photo of an empty pool evoked reflections on lost memories: “I remember jumping off the diving board with my friend and feeling the cold refreshing water ... but now all I see is garbage and graffiti” (Appendix A).

Photovoice As a Tool for Youth Advocacy

Photovoice workshops culminated in at least two opportunities for teens and parents to make formal presentations of their photos, reflections, and ideas for changes to audiences of health providers, educators, policymakers, and community members. Highlights included addressing a statewide audience at Connecticut’s 2nd Annual Physical Activity and Nutrition Symposium. These positive experiences (“It felt good talking in front of people”) helped empower teens and convince them of their authority (“I let them know how things are in New Britain. They didn’t know.” [Appendix A]). Although teens wanted their advocacy work to yield concrete results (e.g., reopening pools), they saw value in the empowerment process itself independent of outcome (“We let our voices be heard.” [Appendix A]) and regarded it as preparation for the future (“The first time is always hard but the next time will be better.”)

For adults, Photovoice was a way of overcoming negative stereotypes (by “showing what goes on inside a home or family”) as well as an opportunity to bond with other Latino parents “and talk about important things.” Teens expressed a desire for more opportunities to make their voices heard, through training in public speaking and by hiring an older peer to lead them in “rallies.” Parents wanted train-the-trainer programs and funding to enable them to facilitate their own Photovoice groups for Latinos.

Discussion

This study demonstrated that Photovoice can be used to complement traditional focus groups to engage Latina teens and parents in assessing barriers to physical activity and advocating for policy actions to address identified barriers. The photographic images amplified, clarified, and added credibility to the teens' and adults' individual impressions about both visible conditions in their neighborhoods (e.g., graffiti, vacant buildings) and their interior correlates (e.g., stress, isolation, and perceptions of racism), leading them to make connections between the built environment, stress, and their motivation to exercise.

Photovoice also empowered Latina teens, who rarely described themselves as leaders in focus groups, to practice and demonstrate strong leadership and advocacy skills. Although photos and reflections bore witness to the city's deficits, Photovoice brought out teens' natural idealism and optimism, enabling them to articulate solutions and advocate for change. Through dialogue with peers and policymakers, Photovoice moved participants from a focus on personal impressions, to identification of common themes and the articulation of a collective agenda for policy change.

In addition to formal presentations, teens engaged policymakers in dialogues about their photos that, in some cases, were the catalyst for concrete policy actions. For example, a discussion about school-based PE with the assistant superintendent of the New Britain school district led to a proposal for an out-of-school option giving students who fail PE the chance to recover credit. The 60-hour course, offered at the YWCA, combines fitness, nutrition, career development, and leadership skills and has been sustained by HT partners. NBHS has permanently modified its school bus route to add a daily stop at the YWCA.

Photos documenting closure of pools in predominantly Latino neighborhoods prompted a discussion with the city's Recreation Superintendent. On his recommendation, teens drew up a petition to reopen the pools, signed by more than 100 community residents, and presented it to the Common Council in September 2010.⁴⁶ Although the pools have not reopened (discussions are underway with the current mayor), teens' accomplishments are measurable in terms of the immediate impact (giving Latina teens a "voice") and the longer-term promise of their continuing advocacy for policy change.

Limitations

This exploratory study's reliance on a small, convenience sample of Latina teens and parents in New Britain limits its generalizability. However, the sustained relationships developed during Photovoice workshops yielded rich insights that may not have been possible with a larger sample. Integrating Photovoice into the original evaluation design may

have diluted the impact of the study. A stronger design would be to schedule Photovoice workshops after the focus groups and define common questions, themes, and analytic procedures for both. Finally, the study period was not long enough to evaluate whether the policy actions were sustained.

Conclusion

Although the study findings are preliminary, they suggest that using Photovoice as an evaluation strategy and leadership intervention warrants further investigation or replication by communities seeking to both understand root causes of the obesity epidemic and to engage community members in local actions to address it. The initiatives triggered by the Photovoice projects (e.g., reopening pools) have become part of the ongoing "policy conversation" in the city. Although participants in the current study identified commonly cited barriers, such as transportation, Photovoice gave them the opportunity to articulate local and cultural dimensions of these themes that led to unexpected new insights.

Photos of closed pools suggested that the deterioration of neighborhood parks deprives teens of memories as well as a place to exercise. Such insights can help public health professionals tailor solutions that have a better chance of success in a particular community. Finally, Photovoice motivated many participants to initiate positive change in their own lives as well as in the community. Further research on clinical applications of Photovoice to promote individual reflection and sustainable behavior change is warranted.

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Appendix A

Photovoice Themes and Reflections



Transportation: unsafe streets (12/2009)
"We walk to exercise our bodies, but we would like it better if there weren't any gangs to mess up our streets." (reflection and photo by Vilma Padilla)



Built environment: neighborhood decay (7/2009)
"In our neighborhood, we saw eyesores, such as bad-smelling dumpsters that make us unhappy. These discourage us to exercise in our neighborhood." (photo by Monica Little)



Built environment: vacant buildings (7/2010)
"I took this picture to show everyone that we have a lot of abandoned buildings that our parents pay taxes on, that we can fix up and build more high schools and other useful buildings." (reflection and photo by Veronica Simon Tirado)



Built environment: closed pools and lost memories (7/2010)
 (Melanie Benitez)
"I remember two years ago I used to go to this pool. Now that it is closed there's no memories left to it. I remember jumping off the diving board with my friend and feeling the cold refreshing water . . . but now all I see is garbage and graffiti. What happened to . . . the days when Washington Park was alive and full of joy." (reflection by Melanie Benitez)



Voice/Empowerment: teens as authorities on their own lives (7/2009) (Monica Little)
"It felt good talking in front of people. I let them know how things are in New Britain. They didn't know." (reflection by *Kassandra Negron*)



Policy Actions: petition to reopen pools (10/2010) (Rosemarie Burgos)
"If the pools do get opened, it will feel good, but aside from that, it feels good that we worked this hard and we let our voices be heard. And we're teens!" (reflection by *Rosemarie Burgos*)

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