

HEALTHY PLACES

The System, Process, and Study Promoting
Healthy Eating and Physical Activity in Children and Youth

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BACKGROUND AND CHALLENGES

Scientific consensus documents have established that poor dietary habits and a sedentary lifestyle lead to obesity, several chronic diseases, and premature death (United States Department of Health and Human Services, 2000). This lifetime behavioral challenge can be described as a community epidemic.

The 1999-2000 National Health and Nutrition Examination Survey showed the prevalence of overweight children in the U.S. at 10% for children aged 2 to 5, 15% children aged 6 to 11, and 16 % among children aged 12 to 19 years. The prevalence of overweight children and adolescents in the United States, ages 6 to 19, has tripled since 1963. The prevalence of overweight and obesity among children and adolescents is increasing at an alarming rate.

The gap between research and practice creates a major challenge in addressing the obesity problem (see our website at www.re-aim.org). Major possible reasons for this gap in obesity prevention include the following:

- States and communities lack a coordinated system for collaborating across agencies.
- Community policy makers and practitioners may need training related to making informed decisions while planning, adapting to local resources and contexts, implementing, and evaluating the translation of evidence-based programs.
- Public health behavior change strategies that have efficacy in controlled research studies may not generalize well to non-research populations and settings. (Dzewaltowski, et al., in press; Glasgow, et al., in press)

A SYSTEM FOR POSITIVE CHILD AND YOUTH DEVELOPMENT AND OBESITY PREVENTION

Purpose of the Healthy Places Framework – The ultimate goal of building healthy places is to promote positive youth development and prevent obesity through the delivery of community-based programs. Positive youth development includes preparing for, and engaging youth in, positive health (e.g., physical activity and healthy eating) and social behaviors (e.g., community service, cooperative interactions) while providing opportunities to develop youth's capacity to avoid negative health (e.g., tobacco use, risky sexual behavior) and social behaviors (e.g., delinquency, violence towards others) (National Research Council and Institute of Medicine 2002).

What is the Healthy Places Framework? – No system exists to improve the quality of evidence-base obesity prevention for children and youth across collaborating agencies and delivery settings. To be successful, obesity prevention initiatives must be integrated into a life-span systems view of positive

child and youth development. Our framework is based on some simple theoretical predictions.

- Provide people in communities with systematic ways to develop environments where people can choose healthy behaviors.
- Rely upon leaders in places where people live, learn, work, and play to help find ways to develop healthy environments. Give them “tools of the trade” to establish healthy place processes and to institutionalize healthy place efforts.
- Stay in touch with place leaders. With ongoing contact, professionals can provide new findings and strategies to community leaders. (See Fig. 1)

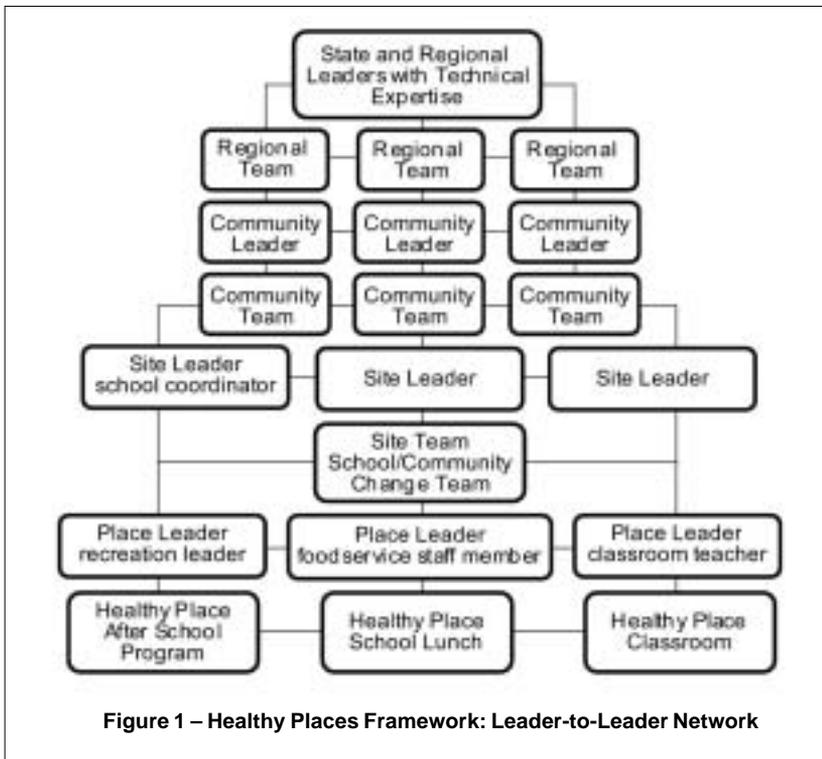


Figure 1 – Healthy Places Framework: Leader-to-Leader Network

OVERVIEW OF HEALTHY PLACES FRAMEWORK

An Operating System to Address Challenges – We continue developing a system to address the three challenges described in the first section by refining and applying our place-based diffusion operating system. The framework includes these components:

Healthy Places Leader-to-Leader Network – Local service providers have traditionally been expected to deliver innovative theory-based strategies for social change that were developed by experts. Governing agencies typically

imposed processes upon local service providers and held them accountable for delivering these strategies.

Because control flows in a top-down fashion in this approach, it is considered a centralized strategy diffusion model (Rogers, 1995). Using top-down strategies may lead to poor implementation rates (Baranowski and Stables, 2000). One alternative to the top-down centralized strategy is a decentralized diffusion system (Rogers, 1995) that provides control, autonomy, skill building, and evidence-based strategies to promote healthy norms to the leaders who deliver the intervention locally.

The system used in the Healthy Places Framework, referred to as a “Leader-to-Leader Community,” typically consists of leaders and groups connecting and communicating knowledge across the levels shown in Fig. 1. The system of nested levels, which can expand or contract to incorporate as many levels as needed, consists of teams that have two-way communication between adjacent levels. To maintain connection between levels, teams on adjacent levels have at least one member in common.

For example, the director of an organization that operates at the state level, might be a member of the team at the top level (state and regional leaders with technical expertise) and a member of a regional team for Northeast Kansas. At least one member of the Northeast Kansas team would also be a community leader, perhaps a family physician working in Shawnee County. Similar connections between adjacent levels having members in common occur throughout the system. Having the teams at various levels also allows cross-site collaboration because the teams gather together peers working in similar places and situations.

Healthy Places Community Hub® – A self-sustaining learning network and diffusion system that drives community planning, evaluation, and feedback around physical activity and nutrition opportunities, accessibility, and program quality improvement for children and youth.

Consistent with our diffusion model, a community/site performance community hub is developed. The term community hub describes a collaborative group that learns together, works together, and provides the diffusion connection for local capacity development. Each program site is represented at performance community activities by the three leaders of the places that come into day-to-day contact with the target audience. The Performance Community Hub meets 4 times yearly with intervention project staff, participates in a monthly conference call, and interacts continuously on the web (www.healthyplaces.org). In each face-to-face and phone session, the performance community is led by the intervention staff as it goes through a goal-setting and feedback process targeting site marketing and development to

promote physical activity and healthy eating environmental change and implement evidence-based strategies. As part of the Community Hub, leaders receive technical training on evidence-based interventions and connect with others in their region and state.

Because the resources and needs of each youth development place vary widely, the activities in the targeted places at each site evidence-based intervention will also vary widely. Within the Community Hub leaders follow a place-based planning model, a number of strategic objectives are targeted, most of which have to do with the fact that skills and self and collective efficacy for environmental change are developed through social persuasion, vicarious modeling experiences, and mastery experiences (Bandura, 1996; 1997). To facilitate capacity building for environmental change, the dissemination system facilitates Healthy Place Change Teams to develop and locate resources that provide each of these sources of information for use by leaders in local communities as part of the planning and implementation process. A central assumption in the development of these resources is that leaders are able to use the information without continued dependence on experts.

Healthy Places Change Team® – A self-sustaining youth-adult leader partnership and coalition building process implemented at each place (e.g., after-school program site). The primary responsibilities of the Change Team are to undertake site planning, evaluation, and feedback creating physical activity and healthy eating opportunities, accessibility, promotion, and program quality improvement for children and youth. Implemented activities are defined as developing policies and practices and delivering the evidence-based intervention to provide physical activity and healthy eating options.

The three personnel who participate in the community hub at the program site will implement the Change Team intervention. The site coordinator leads a youth/adult Healthy Places Change Team to function like the community hub but operate only at the site level. Therefore, the community hub is a model learning experience for the site coordinator to lead the Change Team. The Change Team meets at least monthly and involves representatives from each grade of youth who participate in the site. A site coordinator will help a youth leader (help is dependent on developmental age) conduct the meeting. Community/school adult leaders, parents and staff will be invited to the meeting when appropriate.

Evidence-Based Practices in Community Places – A menu of programs and strategies that have evidence through rigorous research to promote healthy eating and physical activity that can be implemented and sustained in targeted places where children and youth live, learn, and play, such as out-of-school programs, home, early childhood education programs, and faith communities.

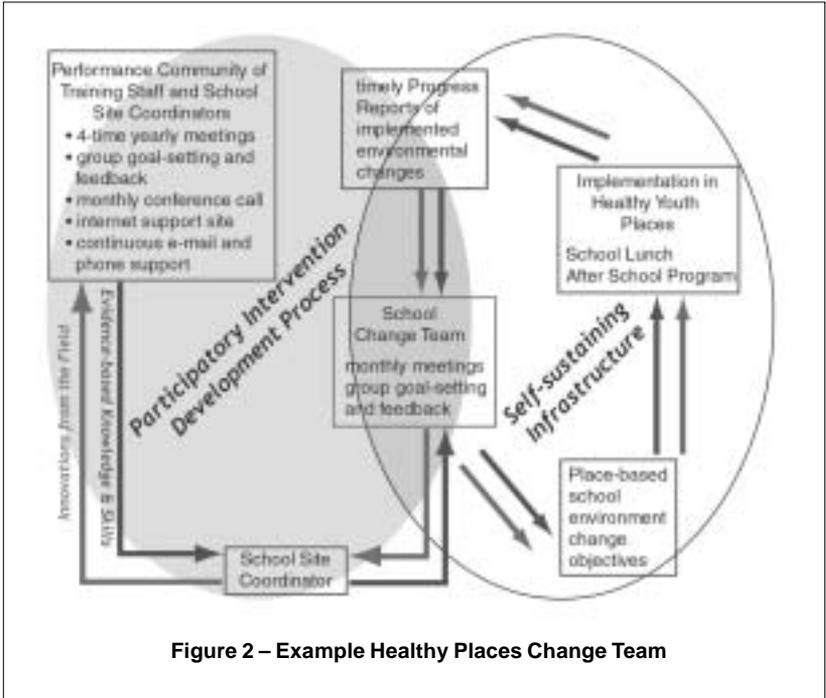


Figure 2 – Example Healthy Places Change Team

For personnel who participate in the community hub and in the change team, capacity to make informed decisions is built over time. They will develop skills in selecting and adapting evidence-based programs and strategies to meet local needs and to move public health outcomes related to eating, physical activity, and obesity. Although control for decisions about what is best for children and youth are made locally, to successfully implement quality programming, these decisions should be informed by evidence-based programs and strategies.

COMPONENTS OF THE SYSTEM

Healthy Places Community Hub®

Healthy Youth Places performance community hub. Consistent with our diffusion model, a community/site performance community hub is developed. The term community hub describes a collaborative group that learns together, works together, and provides the diffusion connection for local capacity development. Each program site is represented at performance community activities by the three leaders of the places. The Performance Community Hub meets 4 times yearly with intervention project staff, participates in a monthly conference call, and interacts continuously on the web (www.healthyplaces.org).

Table 1 – Place-based Planning Process

Step 1	Target a place	<ul style="list-style-type: none"> • After School Program
Step 2	State and document an objective	<ul style="list-style-type: none"> • How will we promote (contact and attract participants to) the place (after school program)? • How will we develop a healthy place and implement the evidence-based intervention?
Step 3	Check Reach	<ul style="list-style-type: none"> • Number, proportion and representativeness of after school program participants
Step 4	Check Quality	<ul style="list-style-type: none"> • Strategies to develop the place? Create policies, programs, and practices to promote connection, autonomy, skill-building, and healthy norms (physical activity and healthy eating options) in the place. • Create strategies to insure fidelity to the implementation of the evidence-based intervention • Strategies to promote the place?
Step 5	Identify Resources and Implement	<ul style="list-style-type: none"> • Group goal setting, monitoring, and feedback

In each face-to-face and phone session, the performance community is led by the intervention staff as it goes through a goal-setting and feedback process targeting site marketing and development to promote PA and FJV environmental change.

As part of the Community Hub, leaders will receive technical training on the evidence-based interventions. After each training, participants will provide feedback about how the training met their needs. The project will be assessed on hypothesized mediators of community capacity, environmental change, and program implementation.

COMMUNITY HUB STRATEGIES

Social persuasion. To motivate the group toward task goals, the community hub meets face-to-face quarterly. Combining these meetings with technical support and training is central to the intervention. Group goal setting and timely feedback on reaching goals will be used in all meetings so participants feel accountable, thereby heightening friendly social pressure to follow through on tasks. These meetings also provide an opportunity for cross-site collaboration on objectives and allows place leaders to connect with one another. Monthly

conference calls supplement the technical assistance, training, and group interaction. After a cross-site performance team is established at a face-to-face meeting, the Healthy Place Performance Community will provide a leader-to-leader web site. This web site allows leaders to connect with each other through a message board and other tools and to organize their efforts around the Healthy Youth Places intervention.

Vicarious modeling experiences. Site coordinators and Healthy Place Change Teams usually lack experience in successfully changing environments, which makes it a challenge to develop self-efficacy. Therefore, the intervention includes a series of video model documentaries that provides stories of successful group-based environmental change experiences. Site coordinators watch the videos at quarterly meetings and then give them to the site leaders for use with local change teams. The stories are hypothesized to raise self- and collective-efficacy for environmental change.

Mastery experiences. Site leaders are trained on the place-based planning model (Fig. 2) for use in their change teams and are provided with feedback documenting progress as they implement environmental changes at their after school site. The Healthy Youth Place Evaluation (H.Y.P.E.) is an extension of our earlier work (Fawcett, et al., 1995). H.Y.P.E. provides groups with mastery information (Dzewaltowski et al., 2002b) and with information for choosing where to invest their efforts. The complete H.Y.P.E. system provides feedback to help groups progress in implementing their place-based environmental changes. The feedback is organized around the key questions addressed in the planning and implementation model and documents students' changes in self-efficacy and behavior.

RATIONALE FOR THE COMMUNITY HUB

To successfully implement sustainable youth development programs, agencies must take into account the existing community delivery systems, resources, and barriers. The role of the community hub is to develop a local coordinating center that can cut across existing agencies and capitalize on opportunities. The community hub can be primarily led by one organization, can be led by two or more collaborating agencies, or can be a truly equal partnership. Regardless of the structure, the hub is a social network that provides public health services by 1) strengthening the collaborative capacity of local organizations and advocating for their interests; 2) working with local agencies to identify places for positive youth development and to build the capacity for financial and facility management of these places; 4) working with local organizations to identify, disseminate, implement, and evaluate the effectiveness of programs and messages, using theory- and evidence-based approaches to improve healthy

eating and physical activity; 5) provide training and technical assistance for these approaches in an ongoing quality improvement cycle.

To facilitate the translation of our study findings to practice, the community hub intervention will be delivered in partnership with local community agencies. This community-level system will also provide assistance in collecting data at the community site level. The intervention and comparison sites housed under each of these organizations will receive funding for personnel for after school program activity. Intervention sites will use funds to meet project goals and comparison sites will use funds to sustain the after school program comparison site.

Healthy Places Change Team®

Healthy Places Change Team intervention. The three personnel who participate in the performance community hub at the program site will implement the Change Team intervention. Each intervention school is provided with a personnel and equipment budget for enrichment activities at the after school site. Enrichment activities are defined as developing policies and practices and delivering the evidence-based intervention to provide PA and FJV options. The site coordinator leads a youth/adult Healthy Places Change Team to function like the community hub but operate only at the after school site level. Therefore, the community hub is a model learning experience for the site coordinator to lead the Change Team. The Change Team meets at least monthly and involves representatives from each grade of youth who participate in the after school program. A site coordinator will help a youth leader conduct the meeting. Community/school adult leaders, parents and staff will be invited to the meeting when appropriate.

HEALTHY PLACE CHANGE TEAM STRATEGIES

Social persuasion and parental involvement. In general, site leaders can use the performance community activities to facilitate healthy place change teams. Each site leader has a goal to create a local change team and have face-to-face meetings where strategies are defined and logged using the H.Y.P.E. system. Media resources provided by the intervention will encourage parents to participate in changing PA and FJV behaviors. The parental component will be modeled after a successful parent-based intervention (called '*PEP up Your Family*') conducted by our consultant Greg Welk. Parents receiving the behaviorally-oriented resource materials had higher expectations for the importance of physical activity in children, and this contributed to increases in a child's perception of parental support for physical activity (Welk, 1999).

Vicarious modeling experiences. Each healthy place change team will be provided equipment and trained to produce local documentary-style public service announcements and environmental change model videos. The goal for each student and adult team (one per site) is to create a video and other media that accomplish the following goals: 1) identify after school FJV and PA goals and options, 2) identify barriers to these behaviors in a variety of settings, and 3) suggest ways to build new attractive, accessible FJV and PA options in a variety of settings. Easy-to-use digital video cameras and digital video editing software have made video production an inexpensive information-sharing strategy. The videos will be shown to community leaders to assist with policy change and at school to recruit students to the after school program.

Mastery experiences. Healthy place change teams are encouraged to focus on developing the after school program. Their successes are documented through feedback by the site coordinators using the H.Y.P.E. system. To link students to the healthy place change team, all students in the program will be taught healthy place development skills when leaders present active learning lessons as they implement the CATCH Kid's Club. We will also supply an environmental skills curriculum for this target audience and setting. This component of the intervention will provide personal mastery experiences to build individual and group capacity and skills and provide mastery experiences to raise individual and collective self-efficacy.

FEATURES OF HEALTHY PLACES

Aspects of Healthy Places – Picture a place where all children and youth can grow, develop, and live safe and healthy lives. Home, school, and community environments interact with children and youth over time to shape their positive (or negative) development (Barker, 1968; Eccles et al., 1993; Eccles et al., 1996). These environments may include home, day care, and faith community settings, schools, and out-of-school settings. Children and youth need 1) opportunities to participate in healthy developmental places; 2) access to healthy developmental places; 3) quality environments and programs.

Opportunity means families and communities dedicate resources to create these settings. Access means that all children and youth, regardless of social economic status, can obtain transportation and support to have sustained involvement in the setting. Quality means that the setting is a healthy place, i.e., supports positive youth development and obesity prevention.

Background on features of quality healthy places – The Committee on Community-Level Programs for Youth of the National Research Council (NRC) and the Institute of Medicine (IOM) prepared a report that evaluated and integrated the current science of adolescent health and development with the

demands of community intervention program design, implementation and evaluation. In the report, the committee distinguished **features of positive developmental settings** from **personal and social assets** that facilitate positive youth development. In the NRC report, the hypothesized features of positive developmental settings included physical and psychological safety, appropriate structure, supportive relationships, opportunities to belong, positive social norms, support for efficacy and mattering, opportunities for skill building, and integration of family, school and communities efforts (NRC-IOM, 2002). In the NRC report, positive youth development was reflected in the emergence of personal and social assets that include physical development (including good health behaviors), intellectual development, psychological and emotional development, and social development (NRC-IOM, 2002).

Concurrently, Dzewaltowski and colleagues developed a categorization scheme useful for communicating the features of positive developmental settings to practitioners that is consistent with the NRC-IOM report (Dzewaltowski et al., 2002a; Dzewaltowski et al., 2002b). Features of positive developmental settings fall into four categories: **C**onnection, **A**utonomy, **S**kill building, and **H**ealthy Norms (CASH; Dzewaltowski et al., 2002).

Connection – People feel connected and have a sense of belonging.

Autonomy – People are free to make decisions for themselves. Healthy environments encourage people to choose from an array of healthy options and to learn from their successes and failures.

Skill building – People can build, demonstrate, and receive recognition for skills. Skills matter to long-term success, and success is about being competent at something that's positive and healthy.

Healthy norms—Finally, healthy behaviors are the norm. In other words, people need a place where most people usually make healthy choices. People have opportunities to participate in healthy behaviors on a regular basis.

Although the Healthy Places approach organizes conceptual hypotheses in a novel manner, there is considerable research to support the influence of well-structured physical and social environments on positive personal and social assets (e.g., Bandura, 1997; Barker, 1968; Eccles et al., 1996; NRC 2002). Further, the NRC-IOM report concluded that community programs can provide a broad range of the features of positive developmental settings to afford youth the opportunity to develop personal and social assets.

HEALTHY PLACES THEORETICAL RATIONALE

The Healthy Places Framework is based on social cognitive theory (Bandura, 1997, Dzewaltowski, 1997), behavior setting theory (Barker, 1968), and the

person-in-environment perspective of ecological theory (Bronfenbrenner 1999; Dziewaltowski, 1997, McLeroy, et al., 1988). This framework illustrates the elements available in a given environment to ensure positive youth development (Dziewaltowski et al., 2002). The framework integrated Bandura's hypothesis of triadic reciprocity between the environment, individual capacity, and behavior with Barker's proposition that behavior occurs in physical and social environments called behavior settings. This integration leads to the primary youth development proposition of the Healthy Places Framework—youth who have sustained and repeated contact with healthy places (i.e., positive developmental settings) will develop individual capacity, or positive personal and social assets, to participate in positive behaviors and to be resilient when faced with potentially negative choices (Dziewaltowski et al., 2002).

DETAILS OF THE HEALTHY YOUTH PLACES STUDY

Objective

To determine if an intervention strategy that implements school environmental change – with adult leader and youth participation – will influence and maintain fruit and vegetable consumption and physical activity.

Methods: Research Design

Group Randomized Trial

- Middle school was the unit of recruitment, random assignment, and analysis.
- 16 middle school settings were grouped then randomized on
 - size (number of students enrolled 20th day)
 - concentration of poverty (percentage of students on free and reduced-price lunch)
 - diversity (percentage of Black/African American, Hispanic, and other ethnic status)
- To control for influence of season on diet and activity.
 - Baseline Assessment, 6th Grade 2000, April
 - Post Intervention, 7th Grade 2000-2001, April
 - Post Intervention, 8th Grade 2001-2002, April
 - Follow up, 9th Grade 2002-2003, April
 - New High School Environment Follow-up

Methods: Setting/Participants

Adoption

- 16 Middle Schools
 - 6 through 8th grade at one site
 - Site-based management by size and homogeneity

Reach

- Total number of participants enrolled on the 20th day of school
 - Active parental consent
 - 6th Grade (77%), 7th Grade (80%), 8th Grade (68%)

Primary Outcome Measures

Fruit and Vegetable Consumption

- Food Frequency Questionnaire (Rockett et al., 1997)
 - Servings of fruit and vegetables per day (F&V)

Physical Activity

- Previous Day Physical Activity Recall (PDPAR; Weston, Petosa, & Pate, 1996)
 - Moderate and vigorous physical activity (MVPA)
 - Vigorous physical activity (VPA)

Selected Intermediate Outcome Measures

Self-Efficacy-Regulatory (Ryan and Dzewaltowski, 2002)

- F&V Environmental Change in the students' homes
 - Get your parents to help you include your favorite fruits in your lunch
- PA Environmental Change in the students' homes
 - Get your parents to help you find different types of physical activities you can do
- F&V Environmental Change at the school
 - Get cafeteria workers to offer more fresh fruit options (like strawberries and apples) for your lunch
- PA Environmental Change at the school
 - Get the after-school program staff to plan physical activities for you and the other members of the after-school program

The Healthy Places Framework

- Place-based diffusion system
- Resources
- Place-based planning and implementation model

Theory-Based Resources

- Mastery Accomplishments
- Place-based strategic and action planning (Goal setting and feedback)
- Environmental Change Active Learning Curriculum Modules
- Social Modeling – Videos illustrating environmental change by other “like” schools (iMovie software, digital camera, & twice yearly video training)
- Social Persuasion
 - Performance community group-based training, technical, and social support with site coordinators
 - Change team group-based training, technical support, and social with adult and youth leaders
 - Internet on line collaboration tools for site leaders

Place-Based Planning Process

- Step One – Target a Place (identify an outcome)
- Step Two – State an objective that answers one of the following two questions:
 - A) How will we develop a healthy place
 - B) How will we promote (contact & attract) participants to a healthy place
- Step Three – Check Reach

- Step Four – Check Quality
 - Strategies to develop the place? – Policies, programs, and practices to promote connection, autonomy, skill-building, and healthy norms (physical activity and healthy eating options)
 - Strategies to promote the place?
- Step Five – Identify Resources & Implement

Success Stories

- Youth led focus groups and survey data collections that informed changes in school lunch and after school programs.
- Youth developed promotional and documentary videos and used them for promotion of after school program to students and for policy change presentations to school board.
- School sports integrated into after school program.
- Site coordinator tracked student involvement after season and recruited students to after school program.
- In several low resource schools, students designed new physical environmental changes (painted fruit and vegetable and physical activity images, posters, etc.)

Conclusion

- An intervention strategy that implements school environmental change-with adult leader and youth participation-influenced and maintained health behavior (physical activity).
- An intervention that facilitates youth to lead the process of environmental change influenced and maintained a positive youth development asset (self-efficacy to change the school physical activity environment).
- The effectiveness of the intervention in improving physical activity was significantly mediated by the development of self-efficacy within youth.

Healthy Youth Places Study Team Members

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