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Engaging Youth in Food Activism in New York City: Lessons Learned from a Youth Organization, Health Department, and University Partnership

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ABSTRACT *Research indicates that insufficient emphasis on community collaboration and partnership can thwart innovative community-driven work on the social determinants of health by local health departments. Appreciating the importance of enhancing community participation, the New York City Department of Health and Mental Hygiene (DOHMH) helped lead the development of the Health Equity Project (HEP), an intervention aimed at increasing the capacity of urban youth to identify and take action to reduce food-related health disparities. DOHMH partnered with the City University of New York School of Public Health and several local youth organizations to design and implement the intervention. HEP was conducted with 373 young people in 17 cohorts at 14 unique sites: six in Brooklyn, six in the Bronx, and two in Harlem. Partnered youth organizations hosted three stages of work: interactive workshops on neighborhood health disparities, food environments, and health outcomes; food-focused research projects conducted by youth; and small-scale action projects designed to change local food environments. Through these activities, HEP appears to have been successful in introducing youth to the social, economic, and political factors that shape food environments and to the influence of food on health outcomes. The intervention was also somewhat successful in providing youth with community-based participatory research skills and engaging them in documenting and then acting to change their neighborhood food environments. In the short term, we are unable to assess how successful HEP has been in building young leaders who will continue to engage in this kind of activism, but we suspect that more extended interactions would be needed to achieve this more ambitious goal. Experiences at these sites suggest that youth organizations with a demonstrated capacity to engage youth in community service or activism and a commitment to improving food or other health-promoting community resources make the most suitable and successful partners for this kind of effort.*

KEYWORDS *Food environments, Youth, Activism, Community health, Local health department*

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INTRODUCTION

While local health departments have long acted to protect the health of vulnerable populations, their emphasis has often been on providing preventive services such as immunizations rather than on addressing fundamental social determinants of health such as poverty, inequality, or racism.[1] As a result, health officials often pay more attention to service-oriented priorities than to the community mobilization needed to modify living conditions. In a survey of 200 local health departments, for example, 75% reported compliance with performance measures related to direct services, while only 56% reported compliance with measures related to building community relationships and constituencies.[2]

Insufficient emphasis on community collaboration and partnership can thwart innovative community-driven work on the social determinants of health. Recognizing this, the CDC has recommended developing community partnerships and mobilization activities as ways to increase health equity.[3] Additionally, research indicates that local health departments tend to perform better when they have more community interactions.[4]

Appreciating the importance of enhancing community participation, the New York City Department of Health and Mental Hygiene (DOHMH) designed an intervention to stimulate dialogue with urban community residents about health disparities and engage residents in efforts to reduce inequalities in health. Specifically, the DOHMH launched the Health Equity Project (HEP), aimed at increasing the capacity of urban youth to identify and take action to reduce food-related health disparities. DOHMH's structure, in which high-need neighborhoods are served by local District Public Health Offices (DPHOs), lent itself well to this project. HEP was implemented in three DPHO neighborhoods, East Harlem, South Bronx, and North/Central Brooklyn. Responding to calls in the scientific literature for productive academic–local health department collaboration,[5,6] DOHMH partnered with the City University of New York School of Public Health at Hunter College. Hunter's team brought an outsider's perspective on ways to shift DPHO activities toward community mobilization, and provided content expertise in developing a curriculum to enhance dialogue with youth.

The decision to focus HEP's work on food arose through consultation with community members, local organizations, and DPHO staff who held concerns about the high rates of diet-linked health problems and the unhealthy food environments that characterize the participating neighborhoods. While diabetes and obesity are growing rapidly in New York,[7] the prevalence of diabetes in the DPHO neighborhoods is disproportionately high, with all three areas registering obesity rates of more than 30% of the adult population, among the highest rates in the city.[8] Stark neighborhood, racial, and socioeconomic disparities in obesity and diabetes rates[9] are strongly influenced by the limited availability and higher prices of healthier foods, and widespread availability of inexpensive, unhealthy foods.[10,11]

HEP's focus on youth was based on the belief that young people have the time, energy, and passion to lead community movements and may constitute an untapped resource for public health.[12] Two examples of youth organizations that have been effective in this domain are Literacy for Environmental Justice (LEJ), a youth organization in San Francisco,[13] and Youth Link, a leadership program in New Mexico.[14] LEJ worked in collaboration with the San Francisco Department of Public Health and local policymakers to develop a campaign to reduce tobacco and alcohol advertisements and to increase fresh produce at corner stores in a low-

income San Francisco neighborhood. Youth Link advocated for multiple tobacco-related policies at city and state levels, ultimately helping to pass a statewide ban on smoking in indoor workplaces and public spaces.

Inspired by these models, HEP sought partnerships with youth organizations that had prior experience in service learning, health programming, community mobilization around health or economic issues, and social justice education. By engaging young people in dialogue about and action to change local food environments, HEP sought to spark wider community attention to policies shaping food environments. HEP's core objectives were to:

1. Introduce youth to social, economic, and political factors that shape food environments and to the influence of food on health outcomes;
2. Provide youth with community-based participatory research skills so that they can become advocates and inform city agencies and service providers of how to better serve their communities;
3. Engage youth in analyzing and then acting to change their neighborhood food environments;
4. Help build young activist community leaders who can address community food access and other matters of community concern;
5. Provide DPHOs with a replicable process (i.e., curriculum) for engaging youth groups in studying and changing food environments that act as social determinants of health; and
6. Increase the capacity of DPHOs to address the social determinants of health by engaging community and youth organizations in an ongoing dialogue.

In this report, we assess the degree to which these goals were achieved, and explore the organizational and program characteristics that contributed to or undermined success.

OVERVIEW OF THE INTERVENTION: HEP'S SITE SELECTION, PROGRAM COMPONENTS, AND STAFF

To achieve these goals, HEP carried out a variety of activities. First, it recruited youth organizations to serve as partners. Some had been partners in previous DPHO activities; others were considered because of their participation in the New York City Department of Youth and Community Development's Teen ACTION program, which helps youth conduct community-based service projects. Two of the three DPHOs assigned staff to assist in identifying appropriate prior community partners, facilitating the recruitment of youth organizations whose mission fit that of HEP's. Project staff met then with potential partner organizations so identified to introduce them to HEP, assess appropriateness as a site, and discuss site logistics such as organizational schedules, space, and staff resources.

HEP took place over the course of 3 years (2008–2010) and constituted three cycles of programming, an initial year-long cycle and two 6-month cycles. HEP included 17 youth program cohorts at 14 unique sites: six in Brooklyn, six in the Bronx, and two in Harlem. A total of 373 young people participated. Data available from cycles 2 and 3 for 240 participants show that 51% were Black, 27% Latino, and 21% reported more than one race or ethnicity. They ranged in age from 14 to 18, and a slight majority (56%) were female. Selected information about the sites is presented in Table 1.

TABLE 1 Overview of participating youth organizations

Cohort	Cycle	Boro	Brief description of organization	Brief description of research	Brief description of action project	Total youth	No. of sessions	HEP staff ratings (Scale 1=high, 3=low)		
								Partner org support[a]	Staff stability[b]	Implementation success[c]
1	1	BK	Multi-service, multi-site social service agency that offers afterschool youth programming. Host for HEP was a program in Bedford-Stuyvesant that emphasizes community service and recreational activities	Assessment of healthy vs. unhealthy food availability, pricing, and promotion of pre-selected food items within 2 blocks of 3 local schools attended by participants	School Lunch Campaign: student opinion survey of school food, cafeteria observational assessment, school food manager interview; meeting with NYC Department of Education's Office of School Food administrators to discuss survey results	19	36	1.7	1.3	2
2	1	BK	Youth center in Bushwick with afterschool academic support, computer, music, art, and dance classes. Students are encouraged to participate in community service and advocacy activities.	Assessment of healthy vs. unhealthy food availability, pricing, and promotion of pre-selected food items within 2 blocks of 3 local schools attended by participants	School Lunch Campaign (see description under cohort 1)	18	36	1	1	1

3	1	BX	Youth Advisory Board of DOHMH office. Designated DOHMH staff meet regularly with participants to develop youth-led health education projects.	Bodega/deli shelf space survey to assess amount of shelf space and product placement for healthy vs. unhealthy food items	School Lunch Campaign (see description under cohort 1)	12	28	1	1	1.5
4	1	BX	Youth center that houses afterschool recreational and academic support programs. Some focus on community mobilization and advocacy.	Assessment of school lunch: student opinion survey of school food, cafeteria observational assessment, school food manager interviews	Not undertaken	12	12	2.5	3	3
5	1	BX	Youth development organization with programs citywide that emphasize community service and offer afterschool recreational activities	Not undertaken	Not undertaken	25	7	3	2	3

TABLE 1 *(continued)*

								HEP staff ratings (Scale 1=high, 3=low)		
Cohort	Cycle	Boro	Brief description of organization	Brief description of research	Brief description of action project	Total youth	No. of sessions	Partner org support[a]	Staff stability[b]	Implementation success[c]
6	2	BK	Four-year community program that prepares East NY high school students for success in high school and college. Program features include college readiness, academic support, and positive peer groups.	Interviews of local grocery vendors to determine what factors influence the pricing of food and why healthy food is sold at a higher price than unhealthy food	Support mobilization for organization's program in which students sell fresh produce in the community. Students presented findings of their summer CFA project to their Community Board and requested letters of support.	40	18	2	1.5	2
7	2	BX	A group of students at an alternative high school in the South Bronx participated in HEP after morn ing summer school hours.	Assessment of healthy vs. unhealthy food availability, pricing, and promotion of pre-selected food items. The survey area was the street where the high school is located between the 2 local subway stops.	Healthy value meal promotion: development of healthy lunch plates palatable to high school students and negotiation with local restaurants to offer reduce pricing for these meals to students	15	12	1	1.5	1.5

8	2	BK	See description of organization for cohort 5. In this cycle, HEP part nered with a high school-based program in East NY.	Two-part assessment: survey of high school students on healthy food preferences followed by an assessment of availability of popular healthy foods at a local bodega frequented by youth.	Development and placement of a "shelf talker" pro motional sign in a local bodega encouraging students to consume bananas as a healthy snack alternative.	39	12	2	2.5	2.5
9	2	H	Community center that offers daily afterschool programming and provides academic support to foster high school completion	Not undertaken	Not undertaken	22	11	2	2	2.5
10	2	H	Youth center with programming supporting academic growth and college and career readiness through arts, media literacy, health education and multimedia technology	Assessment of types of $5 lunches available at restaurants, delis, and bodegas in a roughly 2 block radius near the youth center		30	7	2.5	2.5	3

TABLE 1 *(continued)*

Cohort	Cycle	Boro	Brief description of organization	Brief description of research	Brief description of action project	Total youth	No. of sessions	HEP staff ratings (Scale 1 = high, 3 = low)		
								Partner org support[a]	Staff stability[b]	Implementation success[c]
11	2	BX	An adolescent afterschool program based at a health clinic providing health education (with a focus on sexual health) and academic support	Counts and categorization of prepared food vendors, survey of meal pricing, and presence of calorie labeling at establishments located along a major thoroughfare along which the clinic is located	Healthy value meal promotion: development of healthy lunch plates based on a meal preference survey of clinic staff and negotiation with a local popular restaurant to offer reduced pricing for these meals	18	26	1	1	1
12	3	BK	Community center providing programs for public housing residents, including GED classes, tutoring for students, and health fairs	Assessment of healthy vs. unhealthy food availability and pricing at local stores	Presented results of food assessment to the manager of a local variety store, advocated for healthy food availability, such as stocking 1% milk, and developed a poster targeting food vendors with recommendations for pricing and stocking specific healthy food items	11	12	1	1	1

13	3	BK	See description of Organization for cohort 6 above	Assessment of healthy vs. unhealthy food availability, pricing, and calories per serving at 8 local stores	Not undertaken	25	12	1.5	1.5	2.5
14	3	BX	See description of Organization for cohort 7 above; students in this co hort participated during the school semester.	Student survey to identify health topic to inform the development of a health education and action group in the following semester	Unsuccessful attempts to meet and discuss student surveys with school dean and principal	7	15	2	2	2
15	3	BX	Community development corporation with a youth program focused on community mobilization around environmental justice and health issues	Four-part assessment to determine resident food preferences, a count and categorization of food vendors, a produce inventory, and food vendor interview about produce stocking and sales	Vegetable gardening project with the goal of increasing produce availability to Hunts Point residents at low/no cost	19	19	1	1	1

TABLE 1 *(continued)*

Cohort	Cycle	Boro	Brief description of organization	Brief description of research	Brief description of action project	Total youth	No. of sessions	HEP staff ratings (Scale 1=high, 3=low) Partner org support[a]	Staff stability[b]	Implementation success[c]
16	3	BK	Health-themed high school in East NY	Student survey of healthy food preferences and opinions about school lunch	Presentation of survey results and discussion with school's food service manager. Follow-up advocacy not attempted	27	17	1	1	2
17	3	BX	See description of Organization for cohort 5 above. In this cycle, HEP partnered with an intermediate school-based program	Assessment of healthy vs. unhealthy food availability, pricing, and promotion of pre-selected food items at local stores and at a higher-income comparison neighborhood	Not undertaken	34	12	2.5	2	1.5
Total (mean)						373 (21.9)	287 (16.9)	(1.7)	(1.6)	(1.9)

[a]Partner organization support refers to the degree to which the youth organization supported HEP practically and philosophically. Each staff member who worked with a given cohort rated it on a scale of 1 to 3, with 1 being high support and 3 being low support; results are the means of these ratings

[b]Staff stability refers to how reliable staff were in supporting HEP, and was rated on a scale of 1 to 3, with 1 being high staff stability and 3 being low

[c]Implementation success refers to how successful the site was in implementing HEP activities and was rated on a scale of 1 to 3, with 1 being high success and 3 being low

Partner organizations hosted three stages of work: interactive workshops on neighborhood health disparities, food environments, and health outcomes; food-focused research projects conducted by youth; and small-scale action projects designed to change local food environments. The curriculum for five workshop sessions was collaboratively developed by HEP staff from the Brooklyn DPHO and Hunter College and is briefly summarized in Table 2 and available online.[15] At each site, the program began with interactive classroom sessions led by two trainers, and often with youth organization staff co-facilitating. In the weeks that followed, youth and trainers would move into research project design and implementation in surrounding neighborhoods, followed by action projects ranging from working with bodega owners to provide healthy, affordably priced lunch options to planting a vegetable garden to advocating for more student input into school food decisions.

HEP staff were DOHMH employees working in the DPHOs and graduate and undergraduate students from the CUNY School of Public Health at Hunter College. Of the eight staff, seven were women. Staff ranged in age from 21 to 43 (mean, 29), and were 40 % black, 40 % Asian-American, and 20 % either mixed race/ethnicity or white.

TABLE 2 Overview of HEP workshop curriculum

Major topic	Topics/Activities	Time
Food and health	*Topics*: Neighborhoods and health disparities; preventable health problems, obesity/diabetes; nutrients, calories, food groups; distinguishing healthy and unhealthy foods; portion sizes; role of government in what people eat; international variation in what people eat; why people eat what they eat. *Activities*: Drawing a well-balanced meal; demonstration of amount of sugar in soda; competitive game testing group obesity and diabetes learning; video about neighborhood concentration of preventable illness; graphing rates of illness and health indicators of community compared to other areas, understanding nutrition labels; conducting a demonstration community food assessment.	2 sessions, 7 h total
Media and communication	*Topics*: Food industry advertising; how media influences our knowledge and opinions; communications basics (market, messages, messenger, medium, materials). *Activities*: Competitive group quiz about food advertising; video on unhealthy food marketing to kids; comparing coverage of trans fats on different television networks; viewing and discussion of fast food commercials; analyzing communication strategies of health promotion videos; creating a message to reduce consumption of unhealthy foods.	1 session, 3 h total
Community food assessments	*Topics*: What a community food assessment (CFA) is; research methodology; interviewing; how to design and collect data for a CFA. *Activities*: Q&A with past participants about their CFAs; food outbreak investigation game; CFA project idea brainstorm; interview role playing; choosing a research question; data collection role playing.	2 sessions, 5 h total

METHODS OF EVALUATION

In order to evaluate the process and impact of HEP, several types of data were collected. During cycles 2 and 3, a 20-question survey was conducted with participants. This baseline survey collected basic demographic information (age, grade, gender, race–ethnicity, country of origin, residential neighborhood, and parental employment status), and assessed knowledge and behavior related to health, food, and community participation. At the end of cycle 2, a focus group was conducted with three participants to gather more in-depth data on their impressions of the program and its personal and community effects. In addition, near the conclusion of cycle 3, one author (EKT) who had not been involved in program implementation conducted interviews ranging in length from 30 min to 1.5 h with a selection of site managers (four), trainers (four), and members of the project leadership team (three) to assess lessons learned. Findings presented here are based on a systematic review of data from the focus group, interviews, and documents such as advisory committee meeting minutes and site reports from trainers. These were hand coded by one author (EKT) for common themes using a process inspired by grounded theory, as described by Charmaz,[16] and involving both within-case (cohort as case) and cross-case analysis. Finally, HEP staff independently rated each of the partner organizations on several characteristics that emerged as particularly important to successful implementation through the initial qualitative analysis (see Table 1). Study protocols were reviewed and approved by the Hunter College Institutional Review Board.

LESSONS LEARNED

In this section, we use various sources of project information to assess the process and impact of the following HEP components: partnerships with youth organizations, workshops and curriculum, research projects, and action projects, which are discussed in the chronological order of project implementation. Table 3 presents a summary of factors that facilitated and undermined success across sites.

Partnerships with Youth Organizations

The level of collaboration between HEP and youth program sites proved to be a key factor in successful program implementation. HEP was best able to accomplish its goals when youth organization partners were able and willing to devote real organizational resources to the project (e.g., staff time, space, equipment, and planning) and when the organization could ensure participant continuity. In most cases, the level of organizational support was initially assessed through recruitment meetings and cultivated via ongoing contact. At many sites, however, the decision makers who supported and approved the project were not the same individuals as those who were responsible for its implementation. When decision makers and staff agreed about the feasibility and rationale for HEP, support tended to trickle down. However, at sites where resources were limited and the rationale for HEP was not as clearly conveyed to frontline staff, the project sometimes became an afterthought, with implementation focused merely on completing workshops rather than on mobilizing youth. The level of host site buy-in affected logistical issues as well, such as the availability of space and other resources that sites allocated to HEP.

Having a stable contact person to help with logistical support and to facilitate rapport with the youth was another factor contributing to successful implementation. Unfortunately, due to staff turnover and resource constraints, this basic organizational support proved

TABLE 3 Factors contributing to and undermining HEP success across sites

Primary responsibility	Factors contributing to success	Factors undermining success
Youth Host Organization	Organizational resources devoted to HEP, especially staff time and attention	Lack of organizational resources devoted to HEP, especially lack of a stable staff contact
	Logistical support, especially appropriate space and equipment	Lack of logistical support, especially lack of stable space and lack of equipment
	Youth continuity	Youth participants who attend youth site and HEP inconsistently
	Alignment of host organization's mission with HEP mission, especially around community activism and/or food and health	Lack of alignment of host organization mission with HEP mission, especially around community activism
DPHO/Hunter	Program timing that maximizes youth continuity and logistical ease	Program timing that undermines youth continuity and logistics
	Shorter program length associated with success in basic training of larger number of youth. Longer program length associated with success in research and activism that is youth-led and in developing activist community leaders	Shorter program length undermines ability for youth to lead research and activism projects. Longer program length requires greater resources and thus undermines reaching large numbers of youth.
	Workshop activities involving hands-on learning, visual demonstrations, and competitive or creative games	Workshop activities that were not adequately matched to youth participants' developmental levels. This also relates to class size and age diversity within the class.

challenging to maintain for 3 of the 17 groups. At one site, for instance, grant funding ended for the staff person assigned to HEP, preventing youth at the site from completing an action project (cohort 4 in Table 1). The importance of consistent, high-quality and supportive staffing of youth programs is an issue that has also arisen for other interventions designed to build activism, like Literacy for Environmental Justice.[17] HEP's staffing model relied on collaboration between HEP and youth organization staff, distinguishing it from programs that recruit youth directly or in which existing youth organization staff implement the project. In all cases, however, strong youth–staff relationships and rapport appear to be critical to nurturing youth participation and leadership.[17,18]

Related to this, continuity of youth participation over time was also a key issue within HEP. HEP staff and leaders saw attendance largely as a function of youth program structure, culture, and staffing. Some projects had consistent attendance by the same group of young people over the full project cycle, while others functioned more as drop-in programs, in which youth sporadically visited the site. In these circumstances, HEP staff reported great difficulty in achieving project goals.

Another organizational characteristic that affected project implementation was the degree of alignment of the partner organization's mission with that of HEP. A critical point of alignment was having an activist orientation. Cohort 15, for example, one of the most successful sites, had a mission that was focused on

cultivating activism and community organizing among its teenage members with an emphasis on improving the surrounding community. Youth organization staff and participants were already well informed about health, economic, and environmental issues affecting the area, had conducted local organizing projects, and strongly identified with their community. Where organizations' missions were more focused on individual personal success rather than on building youth as community activist leaders, this lack of alignment could undermine HEP implementation. For example, at one site where there was a strong focus on attending college, youth organization staff who assisted during HEP workshops would often emphasize the importance of personal diet changes during workshop sessions, thus competing with HEP's messages about community-level and policy change (cohort 10 in Table 1). For youth organizations, a mission that touched on health promotion or improving food access was also an advantage for HEP, as in the case of a youth program based at a health center (cohort 11 in Table 1).

Scheduling decisions on the part of the DPHO and Hunter College, such as the time of year in which the program took place and its length, also influenced partnership success. For example, the decision to offer a summer cycle led to competition with compensated youth employment programs. Seeking to maintain youth engagement in the fall was also difficult since young people would sometimes leave the organizations sponsoring summer activities for other school-based youth programs, impeding the completion of research and action projects. When HEP was implemented during the school year, youth attended workshop sessions after spending a full day at school, and thus often had difficulty actively participating in a 3-h session.

As for the length of HEP's engagement with youth organizations, over the three cycles, we worked with sites from 6 to 15 months. What we learned is that both organizational characteristics and program goals influence the amount of time needed to implement the program fully. With a shorter term engagement, it was possible to provide more students with the basic training offered through the workshops (goals 1 and 2), thus reaching more young people. This type of engagement is less dependent on student/staff continuity and less resource intensive because it requires staff time over a shorter period from both the youth organization and HEP. However, it reduces the likelihood that youth will be able to successfully implement a meaningful intervention to change the local food environment (goal 3), and is less likely to contribute to the development of young activist community leaders (goal 4) or ongoing relationships with the DPHOs (goal 6).

With engagement of a year or more, there are greater opportunities to prepare participants to consider their communities and interests, design and conduct their own food-related research project, and create and implement an appropriate action project (goals 2 and 3). These experiences may also be more likely to help youth see how these skills might be used to address other community issues, thus nurturing the development of activist community leaders (goal 4), which could ultimately lead to ongoing dialogue between community organizations and DPHOs (goal 6). New Mexico's Youth Link program, which sought to develop a youth-driven policy agenda, also found that laying the groundwork for youth leadership and "true policy awareness" took time. They found that it was only after well over a year of participation that policy was no longer "ambiguous and too abstract for serious action" in the eyes of youth.[19] However, identifying the sites that can invest in HEP to this degree requires time and resources at the outset, so that early and comprehensive investigations of a site's commitment to and fit with HEP can be conducted. At some sites, we saw a kind of hybrid of these two approaches emerge.

For instance, in cohort 11, 18 youth participated in HEP's workshop sessions, but a few students chose to continue beyond the workshops to conduct a community food assessment and a vibrant local action project, which persuaded two local bodegas to offer "healthy value meals" based on research conducted with community members about meal preferences. These highly engaged youth participated in a total of 26 sessions with HEP staff, by far the highest number of sessions of any group in cycles 2 and 3. Implementing this hybrid more broadly might involve providing the educational aspects of training to all students at a site, but continuing to engage only those who are the most interested in the research and action projects.

Workshops

After partnerships were developed, the HEP workshop curriculum was designed to provide youth with structured learning activities that focused on nutrition basics; the role of media in food choices; the connections between demographic characteristics of communities and their health; and the rationale for and tools to conduct a community food assessment. Based on youth feedback, the workshop activities that were most popular and best achieved their learning objectives were: competitive games, design activities (e.g., an exercise in which youth constructed their own media messages), and demonstration activities (e.g., a measurement exercise showing the amount of sugar in a 16-oz. soda).

When curriculum components were not adequately matched to the developmental level of participants, however, problems arose. Staff encountered substantial differences in the learning capacity between 9th and 12th graders. Some activities requiring more advanced analytical skills proved challenging to younger participants, such as "The Spin: Whose Story?," which asked youth to view news coverage of legislation to ban trans fats and categorize the coverage as either supportive of or opposed to the legislation. Although a wealth of print, video, and documentary film resources now exist on food systems, staff found that many of these materials must be refined to effectively engage youth. In keeping with this theme, some aspects of the curriculum were more successful when youth participants were older or groups comprised a limited age range so that messages could be tailored to them. When workshops included participants of a wide range of ages or when groups were larger in size, HEP staff reported that completing the activities was more difficult.

Youth Research Projects

After the workshops, youth and staff developed local research projects. Grassroots and local organizations have often used community food assessments (CFA) as a basis for action to improve food access and promote community health.[20] This approach inspired the research projects conducted by HEP youth cohorts, which were scaled down from the standard CFA approach to enable youth to conduct research with the time and resources available. Youth participants were expected to define a food-related problem in their community, then carry out activities to document and analyze the scope and causes of the problem. As shown in Table 1, 9 of the 17 cohorts chose to assess food availability and preferences in the neighborhood food environments near their sites, 3 cohorts assessed both neighborhood food environments and school food, 2 assessed school food only, 1 cohort did not assess food, and 2 did not complete assessments.

For the community-oriented research projects, youth identified a target area and criteria for assessing the quality, healthfulness, and price of selected food items. These discussions required participants to consider the methods they could use to

answer research questions about food and health in their community and to generate various hypotheses about the factors that shaped local food choices. Some groups looked at shelf space dedicated to various types of food while others checked the prices of prepared foods that were locally available.

The sophistication of research projects and the ability of groups to complete data collection varied. In one of the more sophisticated efforts, youth from all of the cycle 1 sites decided to work together to assess the Department of Education's lunch program at several schools through student and observational surveys (see Box 1). Other groups interviewed local grocery owners to determine what factors influenced the pricing of food and compared the availability, pricing, and promotion of selected food items at local stores and in a nearby higher-income neighborhood. All but two of the cohorts completed their research projects.

Across sites and cycles, the degree to which youth participated in developing the research and action projects varied. Youth leadership in the design of research projects was largely determined by previously described partnership characteristics such as the amount and length of time trainers were able to spend working with youth and their attendance patterns. In longer cycles, trainers used a variety of strategies to move students through the curriculum efficiently while allowing them freedom to decide research topics and action projects for themselves. In shorter cycles, youth would often

BOX 1 Two HEP action projects

School Lunch Campaign

In cycle 1, three sites met at the end of their workshops to plan a common campaign. They decided to assess the quality of lunch food served in their schools using three instruments they developed: a student survey, a cafeteria survey, and a food service manager interview. Youth participants conducted research in the spring semester and collected more than 200 student survey forms, and conducted seven cafeteria assessments, and three interviews with food service managers. Later in June, youth representatives from participating groups met with representatives of the NYC Office of SchoolFood to share the results of their assessments. The results indicated that over one third of students surveyed do not eat school lunch and over one half eat it 2 days or less per week, citing the primary deterrents as lack of meal variety and unappealing food. Students recommended that mechanisms be put in place for better communication between students and food service managers, that more fresh produce be added to the menus, and that menus be posted with nutritional benefit labeling. The students were able to impress upon the SchoolFood administration that students are concerned about school food and are willing to provide input. Additionally, 2 years later, a group of cycle 3 students were able to take advantage of HEP's relationship with SchoolFood to lay the groundwork for a follow-up action project to improve the school meal program at a middle school in their community.

Healthy Value Meal Project

This project was based at an afterschool and summer program for teens operated by a community health center that had a strong focus on health education and sexual health. After determining that junk food was highly available and healthy food less available in their neighborhood, HEP participants asked, "What kinds of prepared foods are available in our neighborhood?" To answer this question, youth surveyed 27 food outlets along four linear blocks of two main intersecting commercial thoroughfares. The group assessed food outlet type, types of prepared meals, presence of calorie labeling, and least and most expensive meals available. The findings included a high presence of fast food restaurants and outdoor trucks and limited healthy food availability. During the fall semester, several of the participants in the summer program worked with HEP to develop a healthy value meal similar to a child-targeted "Happy Meal." The group created healthy palatable meals that a local restaurant could advertise at a lower price. After surveying 50 health center staff for menu item preferences, the group identified and collaborated with a local Latino restaurant and pizza shop to plan such a meal. The two "Healthy Value Meals" that the group developed for promotion were (1) chicken, green pepper, tomato and onion pizza and a bottle of water and (2) grilled chicken, lettuce, and tomato sandwich and a bottle of water, each priced at $3.50.

quickly adopt a project idea that had been shared as an example of a previous group's work. Despite logistical and time constraints, some youth in the shorter cycles took a more proactive approach. At one site, for example, youth decided that food was not a strong interest for their peers so they surveyed students to identify a health interest that then informed their projects (cohort 14 in Table 1).

Youth Action Projects

Using the model of CFAs, HEP research projects were intended to spur development of action projects to modify the food environment. However, because of time or capacity constraints, only 10 of the 17 groups completed an action project. Two larger-scale projects—a vegetable production initiative and a plan to sell fresh produce—had been initiated previously, and HEP served as a means to advance these existing project ideas. With the exception of the School Lunch Campaign profiled in Box 1, action projects conceived during HEP tended to be small in scale and locally focused. However, youth often reported being surprised by how receptive local residents and food store owners were to their ideas and perceived these interactions as empowering. Box 1 profiles two HEP action projects.

Youth and staff reported several positive outcomes from the action projects. These included more active discussion of food environments within participants' peer group, family, and community; greater awareness of the influence of economic factors and policy on local food options; and a realization on the part of many participants that reducing food-related health problems required community and municipal action as well as individual change.

Final Notes on the Data

In general, the quantitative HEP staff ratings reported in Table 1 confirm qualitative findings. Compared to organizations rated as less successful in implementing their program goals (score>=2), more successful organizations (score<2) were rated as providing more support to HEP (rating of 1.2 vs. 2.0) and having more stable staff (1.2 vs. 1.9). On average, organizations more successful in implementation offered more sessions (20.7 vs. 14.2) to fewer participants (18.1 vs. 24.6) than less successful organizations, confirming the importance of more contact with a smaller number of young people.

Limitations of this evaluation include the lack of more complete data on all youth participants before and after the intervention; potential biases on the part of staff raters, who were also project implementers; and uncertainties about the generalizability of findings about youth organizations from this selected sample to the broad array of urban youth organizations.

CONCLUSIONS AND RECOMMENDATIONS

Based on a review of the available evidence on HEP implementation and outcomes, we qualitatively rate the program's success in achieving its six core objectives. In our view, HEP has been generally successful in introducing youth to the social, economic, and political factors that shape food environments and to the influence of food on health outcomes. In addition, HEP has been somewhat successful in providing youth with community-based participatory research skills and engaging youth in documenting and then acting to change their neighborhood food environments. We are unable to assess our success in building young activist community leaders, in part because this outcome would require a longer period of observation. We suspect that more extended

interactions would be needed to achieve this more ambitious goal, as research from other youth activism projects suggests.[18] Finally, HEP has been somewhat successful in the final two goals of providing local public health offices with a replicable process for engaging youth around food-related issues and in increasing their capacity to more effectively address the social determinants of health by engaging community organizations in an ongoing dialogue. The HEP curriculum can serve as a tool for health departments to prepare young people to engage in food activism, and the DPHOs are involved with an increasingly wide array of community organizations for the purposes of improving food environments. While we cannot solely attribute this latter dynamic to HEP, we find these steps to be encouraging signs.

In conclusion, we find that more successful projects, like cohorts 2, 11, 12, and 15, are most likely to be replicated and sustained through careful assessment of and early collaborative discussions with potential youth partner organizations, with a view toward finding organizations that have missions that align with HEP and a strong commitment to the program's goals. In addition, we recommend the following actions for health departments or universities that seek to partner with youth organizations to encourage health activism. First, youth organizations constitute a critical if fragile asset for health in low-income urban neighborhoods. Organizations with a demonstrated capacity to engage youth in community service or activism and a commitment to improving food or other health-promoting community resources make the most suitable partners, and developing explicit expectations for each partner may help to reduce the logistical and other problems we encountered. Second, dialogue and co-training for project and youth organization staff can help the former to understand the culture, priorities, and constraints of youth organizations and the latter the principles and priorities of the project, in this case food activism. Third, activities should emphasize the expectation that young people will act to bring about community or institutional change. Fourth, health departments and public health training programs might develop and nurture infrastructure (e.g., support networks and leadership academies) that would help build youth leadership on food policy. Finally, to assist health departments to move beyond a service orientation, youth organizations, universities, schools, and other organizations should actively engage health departments in broadening their scope of work to include activities that will create a community base of support for action to modify social determinants of health.

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