Neighborhood Eating and Activity Advocacy Teams (NEAAT): engaging older adults in policy activities to improve food and physical environments

Matthew P Buman, PhD,^{1,2} Sandra J Winter, PhD,¹ Cathleen Baker, MPP,³ Eric B Hekler, PhD,^{1,2} Jennifer J Otten, PhD,¹ Abby C King, PhD,^{1,4}

¹Stanford Prevention Research Center, Stanford University School of Medicine, Stanford, CA, USA

²School of Nutrition and Health Promotion, Arizona State University, Phoenix, AZ, USA

³Health Policy and Planning, San Mateo County Health System, San Mateo, CA, USA

⁴Department of Health Research and Policy, Stanford University School of Medicine, Stanford, CA, USA

Correspondence to: M Buman
mbuman@asu.edu

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ABSTRACT

Local food and physical activity environments are known to impact health, and older adults are generally more vulnerable to health-related environmental impacts due to poorer physical function and mobility impairments. There is a need to develop cost-conscious, community-focused strategies that impact local food and physical activity environment policies. Engaging older adult community residents in assessment and advocacy activities is one avenue to address this need. We describe the Neighborhood Eating and Activity Advocacy Team project, a community-based participatory project in low-income communal housing settings in San Mateo County, CA, as one method for engaging older adults in food and physical activity environment and policy change. Methods and strategies used by the “community action teams” to generate relevant neighborhood environmental data, build coalitions, prioritize complex issues, and advocate for change are presented. Advocacy groups are feasible among older adults to improve food and physical activity environments.

KEYWORDS

Food environment, Physical activity environment, Advocacy, Neighborhood assessment, Seniors, Participatory research

“You may never know what results come of your action, but if you do nothing there will be no result.” Mahatma Gandhi

Cross-sectional and longitudinal research has documented the impacts of food and physical activity environments on health and well-being [1–4]. Recent experimental evidence suggests these neighborhood characteristics may contribute to obesity and diabetes [5]. Older adults may be particularly vulnerable to less favorable neighborhood environments given reduced physical function and mobility impairments [6]. By the same token, older adults can benefit from living in favorable

Implications

Practice: Older adults are an important source of social capital, and it is feasible to actively engage this population in policy-related activities that improve local food and physical activity environments.

Policy: Older adults represent a relatively untapped resource for collecting community-focused data about food and physical activity environments and could help generate community-focused solutions to inform policy decisions about local food and physical activity environments.

Research: As participatory research methods expand into the food and physical activity environment fields, valid and reliable tools that can readily be used by community members are needed to assess neighborhood environments.

environments. Older adults living in “walkable” neighborhoods had higher levels of physical activity [7, 8] and, in some cases, lower levels of overweight relative to those living in less walkable neighborhoods [3]. Likewise, older adults living in neighborhoods with a lower density of fast-food restaurants were less likely to gain weight relative to older adults living in neighborhoods with a higher density of fast-food restaurants [9].

There is now strong consensus among a growing number of researchers and private and public sector health agencies that we must redesign our communities to promote healthier lifestyles [10–13]. The surgeon general has identified five key areas for food and physical activity environmental change: (a) greater availability of supermarkets, (b) greater access to outdoor recreational facilities, (c) fewer advertisements of less healthful foods and beverages, (d) enhanced infrastructures for walking and bicycling, and (e) safer neighborhoods for outdoor activity [10]. However, it remains unclear what the best methods are to spur the type of complex and

multisectoral improvements needed, especially in the current economic and political climate of fiscal restraint.

Environmental and policy changes to improve food and physical activity environments are often difficult to enact due to a lack of relevant data and limited resources to collect such data. Decisions are instead based on short-term demands rather than long-term study, and policies and programs are frequently developed with anecdotal evidence [14]. Low-cost, accessible needs assessment methods are generally not within the scope of many local health agencies' practices. New sources of data generation are needed that collect local, relevant data and foster a community-focused advocacy voice to inform public works, city planning, and policy decisions. We suggest that older adult community residents may be ideally suited to collect these types of data and represent community needs.

Engaging older adult community residents in advocacy has the potential to achieve better local policy outcomes, improve food and physical activity environments, and provide direct benefit to the residents' physical health and well-being. Older adults bring community-focused values and interests to the local decision-making process, thereby ensuring that decisions reflect local priorities and beliefs [14]. This is particularly true in the food and physical activity environment arena, where environments that are "friendly" to older adults are often equally beneficial to other subgroups (e.g., youth, families, persons with disabilities) [15]. This approach is also consistent with a social ecological framework for behavior change in that changes must reflect the values and interests of those affected and also be congruous with social and environmental conditions [16, 17], thereby increasing the likelihood that environmental changes will be translated into individual- and community-level behavior change (e.g., improved nutrition, increased physical activity). Finally, in the current resource-limited fiscal climate, involving older adults in policy activities, as volunteers, represents a cost-conscious approach to assist policymakers in identifying, prioritizing, and enacting relevant local environmental and policy changes.

This paper describes the Neighborhood Eating and Activity Advocacy Teams (NEAAT) Program, a community-based participatory pilot research project implemented in two low-income older adult communal housing settings in San Mateo County (SMC), California. This program serves as a case illustration of one approach to engaging older adults to improve neighborhood food and physical activity environments. In particular, we describe methods for engaging older adults in neighborhood environment assessment, community organizing and coalition-building activities, and decision-making and advocacy training activities.

NEAAT: PROJECT DESCRIPTION

The purpose of the NEAAT project was to empower residents living in low-income older adult communal housing to assess the food and physical activity environments of their local neighborhoods and then advocate among their peers and local governing bodies for environmental and policy-level changes. The primary aims of the project were to (a) build capacity for changing environments through community partnerships, (b) train older adults to be advocates for improved local food and physical activity environments, and (c) disseminate the findings and community organizing methods to local health agencies, organizations, and policymakers.

NEAAT project phases are displayed in Fig. 1. NEAAT began as an academic community partnership between the Stanford Prevention Research Center (SPRC) and the SMC Health System in January 2010. The major phases were:

- Phase 1: An initial community working group was formed to identify a priority population and to solicit input and participation from other county agencies.
- Phase 2: Housing settings were identified from a list of 40 low-income public housing settings within SMC based on the following criteria: (a) consisted primarily of older adults (65 years and older), (b) identified as "low walkable" as measured by the Active Neighborhood Checklist [18], and (c) was of moderate or large size (>50 units). Two settings were identified, one in Daly City, CA (77 units) and one in East Palo Alto, CA (74 units).
- Phase 3: Program implementation occurred between August 2010 and April 2011 and is discussed in greater detail in subsequent sections. The primary way these methods were delivered was through community action teams ("CATs"), which were a collection of 9–12 volunteer older adult residents who participated in regular meetings and activities to address program goals.

Fig 1 | NEAAT project phases

- Phase 4: Initial findings and methods were disseminated through an SMC Health System-sponsored event where participating older adults from the housing settings shared progress on identified projects to community stakeholders. Manualization of program activities is under way.

NEIGHBORHOOD ASSESSMENT OF FOOD AND PHYSICAL ACTIVITY ENVIRONMENTS

Traditional research measures to assess food and physical activity environments are often not useful or accessible by community members who wish to use the tools for community change [19]. Perceived measures often are not correlated with objective measures [20] and do not provide actionable outcomes needed to support change. Research “audit” tools can be cumbersome and require extensive training. Finally, geographic information system measures are typically difficult to access and are not able to assess microscale features important for individual communities (e.g., sidewalk quality, presence of community gardens).

To address the limitations of existing neighborhood assessment tools in participatory research settings, we utilized alternative methods more suitable for intervention and advocacy work. Residents first used “photovoice” to document features of their local environment [21]. The photovoice method included equipping CAT members with cameras and audio recording devices and encouraging them to capture images that reflected positive and negative aspects of their food and physical activity environments. Residents then used the audio recording device to develop a narrative about their observations. These images, accompanied by the audio narratives, were later shared in CAT meetings to facilitate identifying and selecting local issues. Of note, to enhance both ease of use and scalability of the neighborhood audit tool, an electronic version of the tool suitable for use on portable electronic devices such as electronic tablets and smartphones has been developed and pilot tested [22]. Among the features of this electronic tool are global positioning system route tracking, geo-coded audio and image capture, and a post-walk questionnaire, to collect additional relevant information about the neighborhood [22]. Residents then conducted a variety of postaudit needs assessment and problem-focused data collection activities tailored based on the issues raised during the auditing activities. These activities included questionnaires of fellow residents’ beliefs and attitudes about relevant issues, pedestrian and vehicle counts, and food outlet audits. Two examples below illustrate how these methods were implemented.

Example 1: Unsafe street crossing—CAT members identified the street immediately outside the housing setting had high pedestrian and vehicular traffic, yet no street crossing designation (e.g., traffic light, crosswalk). CAT members first surveyed the other

residents of the housing setting to determine the importance of this issue (>50% response rate of residents was achieved): 53% of residents used the intersection four or more times/week; 90% of residents felt unsafe crossing the intersection; 83% used the intersection to go to a store or market, get to a bus or subway station, or walk for exercise or leisure; and 55% felt that a stop sign or crosswalk would solve the problem. CAT members organized a street audit, which involved partnering with local youth who counted pedestrian and vehicular traffic. The youth found that more than 75 cars per hour and 30 pedestrians per hour crossed this intersection. These results were later shared with the county traffic and road operations manager.

Example 2: Availability of fresh produce—CAT members identified a lack of fresh fruits and vegetables at three food outlets within walking distance of the housing setting. With the assistance of Stanford researchers, CAT members developed a simple food audit tool to assess the presence and quality of fresh fruit and vegetables, low-fat dairy, and whole wheat bread. Three housing setting residents were briefly trained on how to use the tool and were asked to conduct these audits at the local food outlets. Contrary to original expectations, the results of these audits suggested that there was a wide variety of these foods offered of good to excellent quality in the stores. CAT members, instead of outward advocacy, advocated among their peers to incorporate these healthful items into their diets.

COLLECTIVE PROBLEM IDENTIFICATION AND ADVOCACY TRAINING

Following auditing of the neighborhood environment, a simple and pragmatic decision-making paradigm was applied to collectively identify and prioritize food and physical activity environmental features for which to advocate change. As shown in Table 1, CAT members collectively rated issues across two dimensions: (a) *importance* for impacting the local food and physical activity environment and (b) *feasibility* of reaching the desired result. Priority was given to issues which were rated high on both dimensions. CAT members were able to reach consensus on how to address each of these issues. Examples of issues are noted in Table 1.

Specific training was provided to CAT members on how to successfully advocate for food and physical activity environmental changes within this housing site (e.g., other residents, property management) and to local policymakers. The advocacy methods were adapted from other advocacy models such as Safe Routes to Schools [23] and Health Equity and Prevention Primer by the Prevention Institute [24]. Key training components included building a case for change, identifying potential allies and resources, and role-playing scenarios targeting local policymakers.

Table 1 | Decision-making paradigm and exemplar priorities identified by community advocacy teams

Importance	Feasibility	
	High	Low
High	Highest priority	Lower priority
	Improved walking access to farmer's market and senior center	Steep hill on local street makes walking difficult
	Crosswalk installation at intersection	Pathway to public transportation unsafe
	Increased availability of fresh produce in local food outlets	Gangs and drugs make street unsafe
Low	Lower priority	Lowest priority
	Additional bus stop at local intersection	None
	Dumpsters outside housing facility are unattractive	
	Vacant field—could be used for gardens and/or green space	

COMMUNITY ORGANIZING AND COALITION BUILDING

We adopted a social action model of community organization [25]. This approach involves task- and process-oriented goals [26]. We focused on both advocating for improved food and physical activity environments (i.e., task-oriented goals) and increasing capacity and problem-solving ability of the community residents (i.e., process-oriented goals). The task-oriented goals came naturally out of the issues being addressed. The process-oriented goals required a multistage process of internal community organization followed by external coalition and partnership building.

The internal community organizing activities (i.e., within the communal housing setting) initially involved recruiting seniors in the communal housing settings to join the CAT groups. Cohesion was enhanced among CAT members through social (e.g., “icebreakers,” potlucks) and task-related (e.g., defining mission and vision statements, assigning roles and responsibilities) activities. These strategies were then turned outward to involve other residents and housing management staff to facilitate further “buy-in” and participation. Periodic social events were sponsored by the CATs to inform residents of CAT activities and progress. These events were typically well attended (i.e., >40% of residents). The external coalition and partnership building took a problem-focused approach, such that partnerships were formed based upon the specific food and physical activity environmental issues being addressed by the CATs. In total, 12 community partnerships were formed. Two exemplar partnerships are described below.

Example 1: Development of a community garden—CAT members identified a lack of access to fresh produce but also identified a housing setting asset of an underutilized community garden. CAT members partnered with Collective Roots [27], a local non-profit garden-based education organization, which provided education, gardening tools, and seeds to develop a community garden.

Example 2: Local business support for a nearby crosswalk—CAT members identified the need for a crosswalk on a busy street that provided access to two local businesses, a convenience/grocery store and a pharmacy. CAT members made contact with these business owners and were successful in securing letters of support for the installation of a crosswalk in the specified location. These letters of support were later shared with local policymakers.

ENGAGING OLDER ADULTS IN THE ENVIRONMENTAL ADVOCACY PROCESS: LESSONS LEARNED

We found engaging older adults in improving neighborhood food and physical activity environments to be both rewarding and challenging. The CAT members were remarkably “action-oriented” and responsive to the collaborative nature of participatory research. Nevertheless, like most community participatory research, relationship building is an arduous task that consumed immense time and energy on the part of all stakeholders—SPRC researchers, county employees, housing setting management, and community residents. However, the collective experience suggests that it is feasible to form community action teams among older adults living in communal housing for the purpose of improving food and physical activity environments.

We suggest the following recommendations for researchers and practitioners who wish to engage older adults in policy-related activities for food and physical activity environments:

- Community organizing and coalition-building activities are an essential component of a successful program, and these strategies must be maintained and developed throughout the program. For older adults, small tokens (e.g., key chains, coffee mugs) and meals/snacks go a long way in engaging individuals in these types of activities. For community partners (e.g., policymakers, health agency employees), a sustained

effort with ongoing opportunity for feedback and input is necessary to maintain involvement.

- In order to effectively harness the opportunity of using older adults in community participatory research for food and physical activity environmental change, assessment tools should be developed or adapted for use by community residents to assess environments in a manner that leads directly to environmental and policy-related change strategies.
- A simple decision-making paradigm such as the one presented in Table 1 appears sufficient for older adults to reach consensus on complex issues that require prioritization.

In conclusion, the evidence on how food and physical activity environments can impact health is compelling enough to warrant intervention approaches that seek to involve specific community populations in their creation and development. Engaging older adults in these types of activities, through community participatory processes, is a potentially cost-efficient method to collect contextually relevant, microscale data needed to enact informed policy decisions and fill a needed role in identifying community-focused solutions. Our experience of conducting the NEAAT project in two low-income housing settings suggests that engaging diverse groups of older adults in policy-related activities is feasible and may represent a promising pathway for improved community health.

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