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Maximizing the Impact of Community-Based Research

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Abstract

Community-based research (CBR) is an increasingly familiar approach to addressing social challenges. Nonetheless, the role it plays in attaining community impact is unclear and largely unstudied. Here the authors discuss an emerging framework aimed toward fostering community impact through university and community civic engagement. They describe how, through application of this framework to initiatives intended to reduce obesity, CBR might be focused for greater effect.

Introduction

Though community-based research (CBR) has been used to address social issues for well over two decades, evidence of its long-term impact in communities is lacking. One reason for this absence is the time required for social improvement to become visible. Of interest to us, however, is the lack of frameworks and models to help research partnerships plan for and reach long-term results *(Bosma et al., 2010; Stoecker, Beckman, & Min, 2010; Stoecker, Loving, Ready, & Bollig, 2010)*. A literature review conducted by Currie et al. *(2005)* in the "fields of health promotion, education, community development, science and technology, and research utilization" suggests the need for such guidance. It shows "no generic, comprehensive models of types of impacts that reveal the real-world relevance of research partnerships" *(p. 401)*. Given the ongoing advocacy for CBR as a means for addressing social challenges, it is increasingly important to understand what works and what does not, not only in the short run, but over time.

In this article we describe a framework we are developing to guide CBR toward long-run impact in communities. To explore the potential efficacy of this framework, we will apply it to a CBR initiative that has been associated with results in our local area. Our hope is that this discussion will encourage others to try out this approach as they engage in their own CBR efforts.

The Framework

Each year, the Corporation for National and Community Service calls for applications from colleges and universities across

the country so that they might gain recognition through its presidential Higher Education Community Service Honor Roll *(http://myproject.nationalservice.gov/honorroll/)*. The 2010 process asked, for the first time, that applicants identify what are being called "outcomes" of university service and service-learning. This is just one example of the current and growing emphasis on community outcomes among academic and community partners working to achieve community improvement.

In our research and practice, we are finding that those interested in and using the term "outcomes" are generally seeking assessment instruments to document and evaluate results associated with individual research projects. While we want the projects that we are associated with to have a plan for attaining measurable results—the kind of plan that might be developed and documented through logic models, for instance—and to follow through to attain those effects, we are not focusing on this aspect of community results here. Rather, we are attempting to formulate a larger framework in which a variety of projects directly connected to and emanating from CBR might be guided toward greater community well-being. Furthermore, we are proposing not a model, but rather a way to think about projects with a view toward the larger potential, such as ripple effects that outlast the specific research endeavor and contribute to community improvement down the road.

The framework involves three key elements: (a) the identification of a long-term goal and the strategies for action to attain that goal, (b) planned ongoing evaluation and revision of strategies and action over time, and (c) broad participation of various constituents across the professional and lay communities involved in or affected by the issue of concern. These elements, while distinct, have an effect on and are affected by one another, and it is the specific way they interact on any given issue that will lead or not lead to impact in the community.

Long-Term Goals and Strategies

Any planner of projects understands the need for stated goals. As is often said, "If you don't know where you're going, it doesn't matter how you get there." Those seeking community change know it does matter how you get there. It is often the "how" that ultimately determines if you get there at all, regardless of whether "there" is a reduction in crime, homelessness, or obesity. Articulating those goals is not easy, particularly for long-term efforts. However, the importance of clearly articulating goals and strategies is the reason

we have made it the pinnacle of the diagram presented in this article.

In setting goals, we also want to be able to differentiate among different time frames. To make the distinctions, we are suggesting specific definitions for the terms outputs, outcomes, and impacts. These terms, in particular outcomes and impacts, are used inconsistently across a number of literatures. For instance, in the public health field, Green, Kreuter, and Deeds *(1980)* refer to outcomes as the effects of a program on long-term measures such as morbidity and mortality, and impact as the immediate effect a program has on knowledge, attitudes, and behaviors. Windsor, Baranowski, Clark, and Cutter *(1984)* define outcomes as anything persisting after the program or health intervention has ended and impacts as the more immediate effects of a program, similar to Green et al. *(1980)*. The field of evaluation is equally divided. A query to the electronic mailing list used by the American Evaluation Association revealed that impact and outcome were used interchangeably. However, slightly more evaluators considered outcomes immediate and impacts longer term events. Strand, Marullo, Cutforth, Stoecker, and Donahue *(2003b)* present a conceptual framework for assessing CBR project results specifically. Some of what they have called outcomes, however, have been defined by others as impacts. Similarly, in a related working document *(PAR Outcomes Project, 2007)* on the University of Wisconsin web site, impact is found on a continuum of time from research through action and into what is called the after-effects.

In our usage, we are building on the work of the PAR Outcomes Project *(2007)*, Stoecker, Beckman, et al. *(2010)*, and Stoecker and Beckman *(2010)*. We define an output as the immediate result of whatever action is undertaken. In the case of CBR, the output would typically be the research report or findings from the research in whatever form given. An outcome would be the effect of that research in the medium term. For example, if the research were used to create or improve a program, the new program or program changes would be the outcome. We define impact as an accumulation of outcomes, and ultimately improved community well-being.

Ongoing Evaluation and Revision

It is optimal to embark on any research project with a commitment to checking on and then redirecting the work as the overall project unfolds. Essentially, the framework we are discussing looks not at the immediate end products of any particular research

project itself (outputs), nor at the programmatic, policy-related, or other more medium-term results that could emerge from those outputs (outcomes), but at a much larger, longer term endeavor to which the research contributes when it plays a key role in community improvement. In other words, the end point should not be an output or an outcome, though each individual project might have such an end point as delineated through, for example, a logic model. Rather, the end point would be a larger community effect such as a reduction in poverty or homelessness. The re-envisioning of strategies that would take place over time would thus be aimed at keeping actions, that is, the individual projects' efforts, aligned to this larger impact goal.

Broad Participation

Broad participation of various parties, both in the conception of the goal and in the activities, including research, that follow from it is encompassed in this framework for a variety of reasons. For one, such inclusive involvement is likely to enhance the possibility of reaching the goal *(Baker, Homan, Schonoff, & Kreuter, 1999; Lynn, 2000)*. For example, if no one among the researchers is connected with an organization that could act on the results of the study, chances of moving toward the longer term aim will be reduced. Also, the initial researchers will not necessarily participate in the next steps at various points; that is, the researchers most closely tied to the academic realm may not continue in the actions that put the research into effect. On the other hand, those that have the most at stake in the outcomes may be in the best position to assure that the research design results in the acquisition of useful information. They might, as well, be the true "experts" in determining whether the results will be used by those who need the information. According to Bayne-Smith, Mizrahi, and Garcia *(2008)*, "multiple types of expertise are usually required to create community change that will improve the quality of life in marginalized communities. This range of expertise must be obtained from multiple community stakeholders including community residents as well as professionals" *(p. 250)*.

This involvement of diverse collaborators may be the most difficult aspect in the implementation of this framework. Historical factors, different uses of geographic space by groups of different races and ethnicities, and other conditions of the specific context of the work must be considered and negotiated in this process *(Beckman & Greene, 2011)*. We are asserting, however, that this is the very kind of engagement that must be worked through for attainment of the long-run impact we are seeking.

Figure 1 depicts a diagram of the framework. An important aspect of the framework, as shown in the diagram, is the influence of each point of the triangle on the others. The goal is at the top, as we believe that the goal is the driver. Goals should be created based on the most current scientific data supported by the experience in the local context and described in measurable terms. The goal will influence and be influenced by who participates in the research, as well as the results of various evaluations.

Inside the triangle frame are the projects designed to move toward the overarching goal. This is where one articulates the strategies for attaining the goals of each individual effort. Here is where the logic model, or other implementation or evaluative model, can track and monitor the research progress of each project toward its individual goals and toward the overall goal. We have located the projects within the triangle because of their dependence on the three legs of the overall framework. Whatever the individual projects may be, they must ultimately address the overarching goal; they each must strive for the broadest possible participation in their conception and implementation; they must also be able to adjust as revisions and evaluations identify areas for improvement in action over time.

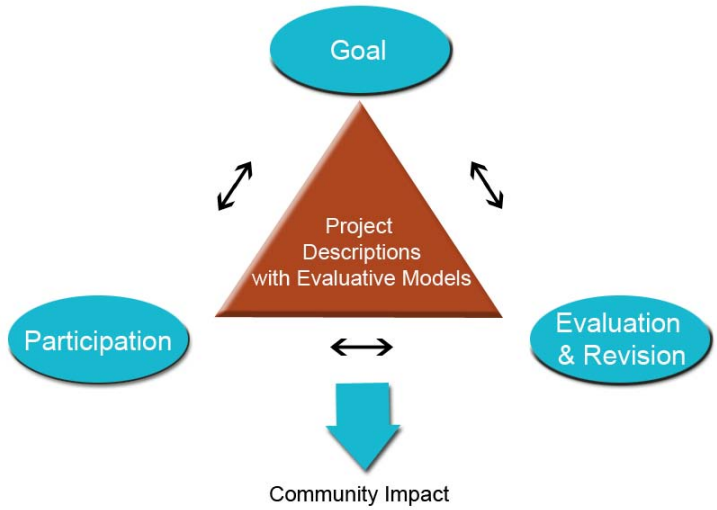

Figure 1. Community Impact Framework. This diagram illustrates the components of the framework and how they interact.

Mini-Grants and Obesity Research

Two authors of this paper have developed and direct a CBR grant program at their university. We wanted to consider how we might use the impact framework we have just described to improve

the chances that the research we fund will lead to more or better effects in our area. One way we chose to explore this was to overlay the framework onto a project that had been funded through our grants. We identified a study focused on obesity that we knew had recognizable results.

In what follows, we first provide information about our granting program. We then present a literature review that led us to the development of the framework. Next, we describe the obesity project and related outcomes, followed by the mapping of the framework onto the obesity-related efforts. We note where the framework does and does not fit what has been accomplished and provide our assessment of the value of the framework for furthering community impact.

CBR Mini-Grant Program

Since 2002, the University of Notre Dame's Center for Social Concerns has been facilitating CBR in a variety of ways. Central to this article is our awarding of three research mini-grants annually.

In spring 2003, the Center awarded its first Rodney F. Ganey, Ph.D. Collaborative Community-Based Research Mini-Grant. Currently, we give three mini-grants annually. The Ganey Mini-Grant program was created to provide research monies to partnerships involving a local nonprofit organization or community representative, at least one University of Notre Dame faculty member, and a Notre Dame undergraduate or graduate student. Recipients of the grants are selected based in part on their plans to use their research to produce measurable, positive outcomes for a community group or organization in the South Bend area.

In keeping with the general understanding of CBR, the question for investigation in each funded project should be one that the local partner's organization or some group within the geographic area is seeking to address. The actual research process should include the community partner as an active participant, with the products of the research, first and foremost, intended to serve the local partner organization or broader community. Desirable also is that projects lend themselves to publishable products for the faculty partner as well as providing students with a meaningful research experience. Examples of research funded thus far include investigations of the economic impact of undocumented workers in South Bend, the mobility rate of children in the local public school system and its relationship to children's pass rates on Indiana standardized tests, and the causes and effects of predatory lending.

The Path to the Community Impact Framework

Over time, the two authors of this paper who are directing the Ganey grant program grew increasingly interested in finding ways of improving the program in order to foster better and greater effects throughout the community. For the purposes of this article, we are not interested in the extent to which individual projects meet their goals per se, though we do ask recipients of the grants to report back on accomplishments, and we ask for evidence of preplanning, toward results, through the delineation of a research design. Rather, we are interested here in how our grant program might be contributing directly or indirectly to positive changes in the quality of life in our community.

As our grant program is housed within the University of Notre Dame's community-based education institute, the Center for Social Concerns, we sought guidance for improving our program in the service-learning and CBR literature. Finding little help there—even in terms of documenting results of investigations—we turned to the related fields of public health and evaluation. Though we found interest in related questions, there was little to guide our considerations there either.

Our review of the literature on service-learning between 2005 and 2010 revealed only a small number of articles that focused on the effects of service-learning on and in communities. Furthermore, when the term "impact" was used as a search descriptor, what we found pertained to students and faculty and not to community changes. We found six articles published between 2005 and September 2010 that mentioned impact as it related to student learning of classroom content *(e.g., Bielefeldt, Paterson, & Swan, 2010; Frazer, 2007; Paoletti, 2007)*. Another 12 were found that looked at the "impact" of service-learning on student attitudes *(e.g., Dukan, Schumack, & Daniels, 2008; Keen, 2009)* and development *(e.g., Borden, 2007; Johnson, 2007)*. Three of the 12 reported on the impacts the pedagogy of service-learning has on teachers *(Bollin, 2007; Hart, 2007; Kirtman, 2008)*.

We identified four articles that looked at service-learning from the perspective of community-based organizations. Blouin and Perry *(2009)* focus on the challenges inherent in community-based work and how to overcome these barriers when participating in community-university partnerships. Sandy and Holland *(2006)* describe characteristics of effective partnerships. Kruger, Roush, Olinzock, and Bloom *(2010)* describe a community-clinical partnership that uses community organizing principles such as

working in a participatory manner to address community issues and engaging in a partnership to build sustainability. In a literature review of the community impact of service-learning, Bringle and Steinberg *(2010)* found, not studies demonstrating how projects improved organizations or communities in measurable ways, but studies on perceptions of the benefits and challenges for community partners of participating in service-learning projects. We did not find literature that documented measurable outcomes such as increases in organizational capacity or reductions in homelessness or food insecurity.

When looking specifically in the area of community-based research, we found an approach to documenting research results by Strand et al. *(2003b)* that suggested looking at multiple levels of effect (e.g., did CBR lead to effects on individuals served by organizations and organizations' capacity). Although this was useful for us, it still looked primarily at individual CBR endeavors and did not attempt to assess effects of research from a programmatic perspective as would an organization such as the W. K. Kellogg Foundation or the Robert Wood Johnson Foundation, both of which assess not only the effects of the individual projects they fund, but also how well they, as funding organizations, are doing in reaching their community improvement goals *(e.g., http://www.wkkf.org/knowledge-center/publications-and-resources.aspx; http://www.wkkf.org/knowledge-center/knowledge-center-landing.aspx)*. The beginnings of a framework that was initially put forward by Stoecker, Beckman, & Min *(2010)*, however, building to some extent on results of a gathering in Paris *(PAR Outcomes Project, 2007)*, led us in a helpful direction. It began to focus on community-wide improvement, rather than on the attainment of individual project goals and objectives.

Case Study: The Reducing Obesity Coalition

In order to explore how the framework could guide initiatives to address complex social issues, we identified a Ganey-funded research project that was associated with a series of results in our local community. We will next explain the research project and the effects in our geographic area that have been related to this research.

In 2005, the Reducing Obesity Coalition (ROC) was formed in South Bend, Indiana, as a group of organizations and businesses realized their mutual interest in the goal of reducing obesity in the surrounding St. Joseph County. The coalition decided to undertake a study predicated on the knowledge that access to healthy food is

associated with relatively low levels of obesity and is also frequently lacking in economically disadvantaged geographic areas. Despite the general availability of healthy produce throughout the state, Indiana is ranked the eighth most obese state in the United States *(Trust for America's Health, 2006).* While no county-level data is available on obesity in St. Joseph County, the high prevalence of low-income and minority populations implies that local rates of obesity may be similar to or worse than Indiana's state levels. Because the west side of St. Joseph County's major city, South Bend, has the city's highest rates of low-income and minority populations, ROC determined that residents' access to healthy food in this section of the city was important to explore. In 2006, a ROC research team applied for and obtained a grant from the University of Notre Dame's Center for Social Concerns to undertake the investigation.

A Ganey Collaborative Community-Based Research Mini-Grant was awarded to ROC for a study that would address two main topics: (a) food availability on the west side of South Bend, as measured by the U.S. Department of Agriculture's Food Security Assessment Toolkit (USDA-FSAT), and (b) adult and child nutrition knowledge and practice, and perceived produce availability. The original research questions sought to focus on the level of access to healthy food options by low-income families residing on the west side of South Bend. The study also aimed at assessing the willingness of these consumers to purchase healthier food if they have the option.

In the first of the two intended foci of the study, prices and availability of food were documented in 10 grocery stores using the USDA-FSAT. The USDA-FSAT is used, in part, to establish food stamp allotments by calculating the cost for a family to eat nutritious meals following a grocery list of foods identified by the Thrifty Food Plan *(Andrews, Kantor, Lino, & Ripplinger, 2001)*. Eight of the stores were in the target area, chosen for its prevalence of low-income and minority households. Two control stores were chosen for being newer stores located in areas of higher affluence relative to the target area. Store sizes were balanced between small groceries, medium/large groceries, and supermarket/retail, which loosely followed criteria set by other studies *(e.g., Neault, Cook, Morris, & Frank, 2005)* and by the USDA-FSAT. In addition to USDA survey data, anecdotal data were collected about the freshness and quality of items. Findings important in the food availability literature include the number of missing food items in grocery stores and the cost of the Thrifty Food Plan relative to food stamp allowances.

Findings of this part of the study indicated that grocery stores in the target area had more missing food items, including fruits and vegetables, than did grocery stores in the control area. Such food item absence can negatively affect budget and nutrition choices, especially for families with the greatest economic need. Four of the ten grocery stores offered healthy food that was barely affordable to families receiving the maximum food stamp allowance provided to those in the lowest income bracket. None of the grocery stores offered healthy food that was affordable to families receiving the average Indiana food stamp allowance, which is less than the maximum amount, as the average Indiana family did not meet income qualifications for full benefits. Furthermore, Neault and colleagues *(2005)* argue that because the current Thrifty Food Plan does not follow the USDA's updated food pyramid, the cost of healthy meals is even higher than the Thrifty Food Plan indicates, which could increase the gap between food stamp allowances and actual grocery needs. The discrepancy between need and allowance is a finding of importance to families that rely on governmental assistance to meet their nutritional needs and is a nationwide concern among food availability professionals. Unfortunately, and typical of studies of this type, due to the small sample size (10 grocery stores), no significance testing could be completed.

The second focus of the study was a survey of children's and parents' nutrition knowledge, location relative to grocery stores, and consumption of and interest in produce. In this study, 67 parents and 95 youth completed a survey of various items related to nutrition. Items included questions on nutrition knowledge, including forced-choice questions, such as the number of servings of vegetables a person should eat each day, the families' proximity to a grocery store, and the families' interest in purchasing affordable fresh produce. The parents and youth were selected because they were considered low-income and most (90%) were minorities. Participants were selected from a summer fitness program targeted toward low-income individuals.

Several findings provided important information about the state of the community. Three topics that generated particular interest included questions about children's nutrition knowledge, children's fast food consumption, and parents' interest in affordable fresh produce. On average children scored 72% correct (scores ranged from 63% to 89%) on a simple nutrition questionnaire that included questions such as, How many servings of fruits should you eat in a day? According to parents' report, 93% of children ate fast food at least one time each week (range 0–1, m = 1.4, sd =

1.3). Finally, parents overwhelmingly (86%) indicated interest in increased access to affordable high quality produce.

Several different groups, including local health coalitions, sought to learn more about the study results. Thus, the investigators and involved Notre Dame undergraduate students gave presentations to local health experts and community members on the USDA-FSAT portion of the study, sparking interest in forming a committee to look into the possibility of starting community gardens, healthy cooking demonstrations, and a farmers' market on the west side of the city. In the end, ROC supported community groups by linking them to resources in the formation of a temporary farmers' market on the west side and additional community gardens the following spring. Several healthy cooking demonstrations by a culinary group and the Health Department were arranged at a local health fair and at the new, temporary west side farmers' market started by community members.

Furthermore, data from the original study were used in several obesity-related grant proposals. One grant, awarded in summer 2008, was used to document available fitness opportunities, including parks, walking and biking paths, workout exercise facilities, and school playgrounds. A second grant, awarded in fall 2008, was a program evaluation of a coach training intervention. A third grant was not awarded initially, but the proposal has been resubmitted by the YMCA to build health-enhancement capacity among leaders in the community. Fourth, a statewide obesity reduction grant was applied for through the Health Department; it was not awarded, but in its place the Health Department was asked to submit and was subsequently awarded a state grant for a school-based health initiative. We specifically mention these last grants because they developed from the interest generated by the results of the initial Ganey grant.

Applying the Framework

The research that began with the Ganey grant has led or contributed to a variety of efforts toward reducing obesity in the geographic area, all of which seem valuable in their own right. Similar types of results can be seen from other studies likewise funded through Notre Dame Ganey grants. Clearly, as anecdotal evidence suggests and our delineation of outcomes related to the ROC study also shows, CBR can lead to positive outcomes in communities.

The results described, however, are not impacts as we are using the term here. An impact is a result of outcomes, or we might say, an accumulation of outcomes and their effects *(Stoecker & Beckman, 2010)*. But the outcomes themselves (e.g., the community garden or the farmers' market) are not and do not necessarily result in impact. Impact would be a reduction in obesity, or some broader effect, ultimately an improvement in local well-being. How, then, can we take informative, useful study results, which we are labeling "outputs," as well as the outcomes that actually follow from these, like farmers' markets or nutritional classes, and get to a reduction in obesity itself, that is, to broader social improvement?

When we began to discuss how to apply the emerging community impact framework in our situation, we struggled to identify who or what should be the agents or site of the original long-term vision the framework calls for. We could have looked at any individual project and used it as our starting point. However, as we were most interested in the original Ganey-funded CBR investigation, and because that study emerged from a coalition of partners, it seemed that the coalition itself would be an appropriate place to start. Also, coalitions have been employed increasingly to address public health concerns *(e.g., Currie et al., 2005; Gillies, 1998; Roussel, Fan, & Fulmer, 2002)*, though there has been scant attention to documenting effects *(e.g., Ansari & Weiss, 2006)*.

Did ROC locate various projects—most relevant here, the Ganey-funded CBR study—within a long-term vision with an explicit goal? That is, referring back to our diagram of the framework presented in Figure 1, could we see the Ganey grant research as one of a number of projects in the center of the triangle? And did ROC plan for and undertake evaluation and revision along the way? Did it foster the incorporation of broad community participation throughout? In other words, did ROC hold the overall framework depicted in our earlier diagram?

Long-Term Goals and Strategies

The initial mission of ROC was to "promote healthy lifestyles for residents . . . through a county-wide collaboration." Clearly, it had a long-term vision but it did not have a measurable goal, and it set forth no coherent set of strategies for fulfilling the vision over time. Soon after forming, the coalition applied for a Ganey grant to study access to produce. The study fit the overall mission of ROC, but the decision to pursue this study was made arbitrarily; it had

no relationship to a systematic, thought-out pursuit of a long-term goal other than generally to reduce obesity in St. Joseph County.

The lack of clearly identified strategies had a number of important implications. ROC could not consider how any specific project would interact with other projects to move toward the goal. If it had had well-articulated strategies and measures with clear linkages, researchers might have perceived a need for baseline data on local obesity in order to determine whether obesity rates declined. Possibly more critical than the original food availability grant would have been a grant to collect BMI data from the school system in order to establish baseline obesity data. Even prior to this, the coalition might have sought to determine how obesity would be measured, as well as other outcomes associated with obesity, such as sedentary behaviors or the built environment in which certain populations live.

Ongoing Evaluation and Revision

Evaluation and action revision were not intentionally built into ROC, although there is an ongoing commitment to research, and spontaneous revisions did take place. In the fall of 2008, a number of aspects of ROC were revisited and revised by a strategic planning committee of volunteers: an advisory board and steering committee were created; the mission statement was updated; five goals and related objectives were created to improve individual and household attitudes toward health and wellness; and operating principles were written to guide participation, the structure and governance of each committee, how decisions are made, responsibility to constituents, and promotion of ROC. The current mission statement is: "To promote healthy lifestyles . . . through the prevention and reduction of overweight and obesity in adults and children." Also in 2008, a decision was made to seek more diversity in membership. An advisory board of community leaders representative of critical agencies was created and its membership crafted to reflect diversity in terms of ethnicity, gender, and occupation. While the group decided it would be important to recruit more males and representatives of minority groups, there has not been discussion of recruiting any lay community members and in particular individuals that might make up the populations involved directly as subjects of studies.

The revisions of 2008 indicate attention to the importance of ongoing adaptation. But the revisions pertained more to the functioning of the coalition than to the projects that sprang from it.

The Ganey grant was written with the intention of using research results to inform public policy decisions and to collect and organize data related to health in St. Joseph County. However, the coalition had not determined specific ways it would address the information obtained through the initial Ganey study. Nor did it consider how it might relate to various other projects that could emerge within its midst—such as the community garden. And without baseline data, it did not have the capacity to offer any data to local gardeners or others also wanting to address the goal; in other words, it would not be able to help them direct their efforts in any measurable way.

Those leading the CBR effort could have attempted to link its work with a longer-term goal, had there been one, perhaps planning for how the information obtained might be used and next steps, or urging ROC to consider such actions. After obtaining results and presenting the data, researchers could have built in additional money to alter the survey following community feedback, and then proceeded to next steps or passed along the project to others. While there is currently a loose plan in place to collect more data, additional planning could certainly improve the process. The goal of this particular plan is to provide information about the area for any subsequent grants.

The four grants that followed from the initial Ganey study, as well as the community garden and farmers' market projects, also might have looked different with this community impact framework in mind. While all projects have flourished outside the direct influence of ROC, they have done so with a lack of direction or identified measurable outcomes. Had they been connected, each project could have conducted its own evaluations to look at who participated, what happened, and how the project was working toward the overall goal of reducing obesity. Additionally, ROC could track and measure its own objectives through coordination with these other projects. An overarching group could survey the community to identify needed new locations and other issues of concern, which could improve community acceptance and involvement. With knowledge of community needs and strengths, ROC could facilitate additional projects that could happen simultaneously with those currently ongoing. For another example, if lay community members wanted cooking lessons, these could be arranged intentionally at garden sites during peak season, or specifically requested vegetables and fruits could be grown in the gardens.

Broad Participation

ROC membership is diverse in that it includes over 60 groups and represents universities; human resource departments in businesses, health nonprofits (e.g., YMCA, Diabetes Association) and other related nonprofits; and for-profits (e.g., manufacturing businesses). The design of ROC, however, was completed by health experts and university researchers only. No nonprofessional or lay community members[1] were part of the first few years of ROC, and only a few males and minorities were involved, though this changed to some extent in 2008.

In all but one of the four subsequent related studies, no lay community members were involved in the development of the research questions, design, or administration. One of the studies was an exception, and involved lay community members in editing and administering surveys.

Returning to the original Ganey-funded project specifically, application for the grant required that the proposal include an explicit community partner as well as university partners; however, it did not specify the extent of participation of noncampus partners per se. In the ideal, a community-based research project would be written with input from lay community members, instead of local health experts and university members exclusively *(Flicker & Savan, 2006; Israel, Eng, Schulz, & Parker, 2005; Minkler & Wallerstein, 2008; Strand et al., 2003a)*. Ideally, community members would have guided the overall research question creation, selected the surveyed grocery stores, edited the surveys, helped collect the data, and guided data analysis. During and after data collection and analysis, lay community members could have provided feedback to improve the data collection process and analysis. For example, they could have suggested other questions to add to the USDA-FSAT survey and offered different ways of looking at the data. In sum, despite attention to diverse participation, the inclusion of multiple perspectives throughout was not ideal.

Applying the Framework from Today Forward

We see no reason why ROC could not use the framework discussed herein as it moves into the future. Were the coalition to use the framework as depicted in this article, it would be able to start tracking how its efforts have affected events around the community. The framework would also help its members see connections among the projects, and this might help them better amass and direct resources toward impact.

Long-term Goals and Strategies

First, we would urge ROC to identify measurable community-wide obesity reduction and prevention goals. ROC can lead the effort to organize major stakeholders in the community to determine the main outcome all obesity prevention activities should try to attain (e.g., reduce the average Body Mass Index of specific populations). These major stakeholders can identify subgoals that support the main outcome, as well as metrics to measure the progression toward the goals. For example, if the stakeholders decide the main outcome should be reduction in average Body Mass Index, a subgoal would likely be increasing nutrition awareness. By setting and agreeing on goals and strategies, ROC planners can look for complementary projects and help lead these projects toward a coordinated goal.

Ongoing Evaluation and Revision

Planning for ongoing evaluation and revision can be done within ROC. Annually, new members for the Steering Committee and Advisory Council are chosen. Reviewing goals and progress can happen naturally during the transition time. Announcing new goals and reviewing the year's progress can be done at meetings when new members are introduced. The current ROC Steering Committee could simply write guidelines for this evaluation and revision.

By placing value on ongoing evaluation, annual projects such as community gardens and farmers' markets can be organized to collect and incorporate feedback in a routine way, and may include suggestions as to new locations, vegetable and fruit selection, and so on. One difficult issue in such research is measuring effects. Many community interventions take place, but they are often not assessed. Factors likely to encourage assessment include setting a goal for each intervention, and involvement of a larger body committed to evaluation. It is possible to start a central database of data collected on common measures; this data could then be used to track progress toward community goals, as well as to apply for subsequent grants.

Broad Participation

More diverse community involvement would also be a priority. Most important would be the involvement of lay community members in ROC, in particular those who would most likely be affected by any research or projects conducted—that is, those some might refer to as the target populations. Interested community members

initially need to commit only to attending a predetermined number of meetings per year. Identifying appropriate community members might be difficult; however, assuming ROC and related organizations commit to valuing participation, the current organizations likely can suggest a number of lay community members.

Conclusion

Community impact is difficult to measure and achieve. It is difficult enough to assess the effects of individual research and related projects; it is even harder to assess the effects of multiple projects and how they interact. Here we are going further yet and considering a longer term view.

Based on dialogue with a number of colleagues around the country and our own experiments with moving our work to achieve community impact, we have proposed a framework here that we hope can help guide community endeavors in which discrete projects are connected to a broader, longer term enterprise whose end point is community improvement. We have laid out the three basic elements of the framework—a clear long-term goal and strategies to achieve that goal, the commitment to evaluate and revise projects midcourse as necessary to stay focused toward the main goal, and a commitment to the broadest participation possible. By overlaying the framework onto the community results related to a CBR project, we hope we have provided in this article some evidence of the potential value of the framework. We intend to develop it more fully over the next few years and have already begun this process by applying it to our work with our grants program.

Endnote

1. Though CBR studies use the word "community" liberally, this term is seldom defined. When practitioners of CBR say they are working with "the community," they may not always be referring to the same groups. Various literatures define community *(e.g., Chappell, Funk, & Allan, 2006; Chavez, 2005; Israel et al., 1998)*. Among the factors delineating community are locality; shared experiences, interests or perspectives; joint action; social ties; and interpersonal interactions *(MacQueen et al., 2001)*. In this article, we use professional community to refer to the organizations that are locally based national service and locally conceived service organizations that work in areas related to obesity. These members may be extremely well informed about the communities they serve, but they are rarely the people of interest for the study. We use lay community in keeping with

the way this term is used in certain psychology and public health literatures, to refer to individuals that have no particular background or expertise in the study or addressing of obesity and also to refer to individuals that are experiencing aspects of obesity and who might constitute subjects in studies on obesity because of that experience.

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