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Community-based Participatory Research: Assessing the Evidence

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Prepared by:
RTI International-University of North Carolina
Research Triangle Park, North Carolina

Investigators
Meera Viswanathan, PhD
Alice Ammerman, DrPH, RD
Eugenia Eng, DrPH
Gerald Gartlehner, MD
Kathleen N. Lohr, PhD
Derek Griffith , PhD
Scott Rhodes, PhD
Carmen Samuel-Hodge PhD
Siobhan Maty, PhD
Linda Lux, MPA
Lucille Webb, MEd
Sonya F. Sutton, BSPH
Tammeka Swinson, BA
Anne Jackman, MSW
Lynn Whitener, PhD

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Preface

The Agency for Healthcare Research and Quality (AHRQ), through its Evidence-Based Practice Centers (EPCs), sponsors the development of evidence reports and technology assessments to assist public- and private-sector organizations in their efforts to improve the quality of health care in the United States. This report on *Community-Based Participatory Research: Assessing the Evidence* was requested and funded by the Agency for Healthcare Research and Quality. Partial funding for this report was provided by the National Cancer Institute, Division of Cancer Control and Population Sciences, and by the National Institutes of Health's Office of Behavioral and Social Sciences Research. The reports and assessments provide organizations with comprehensive, science-based information on common, costly medical conditions and new health care technologies. The EPCs systematically review the relevant scientific literature on topics assigned to them by AHRQ and conduct additional analyses when appropriate prior to developing their reports and assessments.

To bring the broadest range of experts into the development of evidence reports and health technology assessments, AHRQ encourages the EPCs to form partnerships and enter into collaborations with other medical and research organizations. The EPCs work with these partner organizations to ensure that the evidence reports and technology assessments they produce will become building blocks for health care quality improvement projects throughout the Nation. The reports undergo peer review prior to their release.

AHRQ expects that the EPC evidence reports and technology assessments will inform individual health plans, providers, and purchasers as well as the health care system as a whole by providing important information to help improve health care quality.

We welcome written comments on this evidence report. They may be sent to: Director, Center for Outcomes and Evidence, Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, MD 20850.

Carolyn M. Clancy, M.D.
Director
Agency for Healthcare Research and Quality

Jean Slutsky, P.A., M.S.P.H
Acting Director, Center for Outcomes and Evidence
Agency for Healthcare Research and Quality

Robert Croyle, Ph.D.
Director, Division of Cancer Control and Population Sciences
National Cancer Institute
National Institutes of Health

Virginia S. Cain, Ph.D.
Acting Director, Office of Behavioral and Social Sciences Research
National Institutes of Health

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The investigators deeply appreciate the considerable support, commitment, and contributions of the EPC team staff at RTI and UNC. From UNC, we thank the EPC Co-Director, Timothy S. Carey, MD, MPH; Research Assistant Donna Curasi; and abstractors, Karen Pilliod, MPH; Jill McClain, MA; and Laura Sterling, MD. We also express our gratitude to Debra J. Bost, editor, and Loraine Monroe, EPC word processing specialist, at RTI International.

We also extend our appreciation to the members of our Technical Expert Advisory Group (TEAG), who provided advice and input during our research process. TEAG members were Jack Geiger, MD; Russell Glasgow, PhD; Barbara Sabol, RN; Deborah Jones-Saumty, PhD; Jesus Ramirez-Valles, MPH, PhD; Gwen Bampfield-Wright, JD, MSW; Glenn White, PhD; Alex Allen, MSA; Meredith Minkler, DrPH; Barbara Israel, DrPH; and Monika Suchowierska, MA, BCBA. We would also like to thank those who did not serve in the capacity as TEAG members, but were Expert Meeting participants: Benjamin Fraticelli, MDiv, MPH; Tom Kelly; Elmer Freeman; Linda Randolph, MD, MPH; Victor Rubin, PhD; Jeam Schensul, PhD; JoAnn Umilani Tsark, MPH; Tony Whitehead, PhD; and Jon Kerner, PhD.

We deeply appreciate the insights of our peer reviewers. The TEAG members who served as peer reviewers include Alex Allen, Gwen Bampfield-Wright, Barbara Israel, Deborah Jones-Saumty, Mereidith Minkler, and Jesus Ramirez-Valles. In addition, Ann Beal, MD, Tom Bruce, MD, Paul Estabrooks, PhD, Victor Rubin, PhD, Sarena Seifer, MD, Shobha Srinivasan, Ph.D., JoAnn Umilani Tsark, MPH, and Tony Whitehead, PhD.

Structured Abstract

Context: Community-based participatory research (CBPR) is a collaborative approach to research that combines methods of inquiry with community capacity-building strategies to bridge the gap between knowledge produced through research and what is practiced in communities to improve health. Interest is growing rapidly for academic institutions, health agencies, and communities to form research partnerships; few agreed-upon guidelines describe how to develop or evaluate CBPR proposals or what resources are required to promote successful collaborative research efforts.

Objectives: This systematic review consolidates literature on health-related CBPR. We addressed the following key questions:

> **Key Question 1:** What defines CBPR?
> **Key Question 2:** How has CBPR been implemented to date with regard to the quality of research methodology and community involvement?
> **Key Question 3:** What is the evidence that CBPR efforts have resulted in the intended outcomes?
> **Key Question 4:** What criteria and processes should be used for review of CBPR in grant proposals?

Data Sources: For KQs 1-4, we searched standard electronic databases (MEDLINE®, Cochrane Collaboration resources, Psycinfo, and Sociofile) for all years using specified Medical Subject Headings terms. We identified a forthcoming special journal issue and hand-searched reference lists of relevant articles. For KQ 4, we also reviewed websites for funding agencies and talked with federal agency staff.

Study Selection: For KQ 1, we used peer-reviewed articles that synthesized the evolution of, values for, or lessons learned from collaborative research. For KQ 2 and 3, we included peer-reviewed CBPR studies published in the English language, conducted in the United States and Canada, and with at least one community collaborator.

Data Extraction: To review articles for KQ 1 through 3, we created separate abstraction forms. We entered abstracted data for KQ 1 into a domain matrix and for KQ 2 and 3 into evidence tables. We created quality rating forms to assess each study's research methods and adherence to CBPR principles of community collaboration.

Data Synthesis: We reviewed a total of 185 articles: 55 for KQ1; 123 for KQs 2 and 3; and 7 for KQ 4. The 123 articles for KQs 2 and 3 pertain to 60 CBPR studies. Of the 30 intervention studies, 12 had been completed and evaluated. Quality ratings for these suggested stronger research scores for the experimental studies than for the others, although nonexperimental studies also showed modest effects on health outcomes. Quality ratings for community participation were strongest for recruitment/retention and intervention design followed by development and pilot testing of measures. Steering committees or advisory boards were the main mechanisms for sharing research decisionmaking, but these formal structures generally did not develop research questions or proposals.

The number of high-quality CBPR publications has increased recently, which may reflect more targeted funding and special journal issues on this theme.   Guidelines are still needed to assist funding agencies and grant applicants and reviewers in achieving the best balance of rigorous research and optimal collaboration among communities and institutions.

Conclusions: Many CBPR studies had strong community-institution collaborations; relatively few combined this type of collaboration with solid research methods. Our synthesis of this literature enabled us to produce guidelines to improve the quality of and funding for CBPR.

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Community-Based Participatory Research: Assessing the Evidence

Summary

Introduction

Community-based participatory research (CBPR) is an approach to health and environmental research meant to increase the value of studies for both researchers and the community being studied. This approach is particularly attractive for academics and public health professionals struggling to address the persistent problems of health care disparities in a variety of populations (identified by factors such as social or economic status, lack of health insurance, or membership in various racial and ethnic groups).[1-6] Few guidelines exist for evaluating CBPR grant proposals and determining what resources are required to promote successful community-based research efforts. Still less is known about the degree to which CBPR has been effective in sustaining long-term university–community partnerships and generating high-quality data to guide further research. Experts are becoming impatient with the gap between knowledge produced through conventional research and the translation of this research into interventions and policies to improve the health of various groups, especially minority communities and other disadvantaged populations.[2,7-12]

Done properly, CBPR benefits community participants, health care practitioners, and researchers alike. CBPR creates bridges between scientists and communities, through the use of shared knowledge and valuable experiences.[13-17] This collaboration further lends itself to the development of culturally appropriate measurement instruments, thus making projects more effective and efficient.[18,19] Finally, CBPR establishes a mutual trust that enhances both the quantity and the quality of data collected.[13,20-22] The ultimate benefit to emerge from such collaborations is a deeper understanding of a community's unique circumstances, and a more accurate framework for testing and adapting best practices to the community's needs.[2,13,15,18,23-29]

In 2001, the Agency for Healthcare Research and Quality (AHRQ), in collaboration with several Federal agencies and the W.K. Kellogg Foundation, convened a 2-day conference "to promote and support the use of CBPR, to develop strategies to advance CBPR, and to explore the use of CBPR as a resource for policymakers to help guide their program development."[30] AHRQ organized the meeting specifically to address three key barriers to CBPR: (1) insufficient community incentives (staffing and resources) to play a partnership role in CBPR projects; (2) insufficient academic incentives (staffing and resources) for researchers to play a partnership role in CBPR projects; and (3) inadequate funding and insensitive funding mechanisms.[*]

The conference membership recommended an AHRQ-commissioned study of the existing evidence on the conduct and evaluation of CBPR, performed by one of the Agency's Evidence-based Practice Centers (EPCs). Accordingly, the Agency commissioned the RTI International–University of North Carolina (RTI-UNC) EPC to produce a systematic review and synthesis of the scientific literature regarding CBPR and its role in improving community health. Specifically, the EPC investigators were asked to consider four Key Questions (KQs):

KQ 1: What defines community-based participatory research?

KQ 2: How has CBPR been implemented to date, with regard to the quality of research methodology and community involvement?

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[*] Drawing on this conference, AHRQ prepared a guide to community-based participatory research for community groups and the general public, The Role of Community-Based Participatory Research: Creating Partnerships, Improving Health (AHRQ Publication No. 03-0037, June 2003).

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Evidence-Based Practice

KQ 3: What is the evidence that CBPR efforts have resulted in the intended outcomes?

KQ 4: What criteria and processes should be used for review of CBPR in grant proposals?

Methods

In 2002, the EPC convened a group of experts to provide early guidance for the investigation. The meeting participants included community research partners, academic researchers, and CBPR research financiers, bringing a diverse range of perspectives to the review. Feedback from the expert meeting substantially altered the researchers' search terms and their research questions.

Search Criteria

Articles considered for the EPC review included peer-reviewed reports of human studies, across all ages and both genders, conducted in English-speaking North America (U.S. and Canada), and published in the English language. The source language was limited to exclude from consideration international studies conducted in vastly different sociocultural and political climates. However, international publications that described the history and definition of CBPR were included. Editorials, letters, and commentaries were excluded from the analysis, as were articles in which information related to the key questions was not reported. The EPC staff limited its review to studies that included at least one community as a research collaborator and, therefore, excluded studies that involved only health agencies or other professional institutions in the research process.

Relevant Data Sources

For KQs 1 through 3, the EPC first searched standard electronic databases—e.g., MEDLINE®, Cochrane Collaboration resources, PsycINFO, and Sociofile—using search terms based on the inclusion/exclusion criteria and additional key terms identified in the expert group meeting. The EPC researchers then consulted their Technical Expert Advisory Group (TEAG), regarding in-progress studies that had not been published. Key among the sources of information identified was a special CBPR issue of the *Journal of General Internal Medicine* (July 2003). The third level of the investigative process required EPC reviewers to perform hand searches of the reference lists of relevant articles, for the purpose of identifying additional articles to gain full information on particular studies. Unlike many research areas, searching the CBPR literature is labor- rather than computer-intensive.

For KQ 4, very few peer-reviewed articles directly addressed CBPR funding issues *per se*.[31] Rather, the culled materials had a tendency to describe agency or foundation funding mechanisms used to support CBPR.[32,33] Accordingly, the EPC researchers reviewed the Web sites of several organizations funding CBPR research and spoke with funding agency representatives involved in the development of CBPR-related grants programs or their agencies' grant review process.

Data Collection and Analysis

Data was collected for KQs 1, 2, and 3 through the abstraction of relevant information from eligible articles and the creation of summary evidence tables presenting the key details and findings for the articles. The EPC paired trained abstractors with a senior reviewer, who used an analytic framework to guide development of abstraction tables. The EPC researchers used the same framework to rate the quality of both the primary research and primary community-based participation elements. They rated the quality of only those studies (often represented by a set of published articles) representative of a completed intervention study evaluation, or an observational study designed to permit extrapolation beyond the study population.

Results

The EPC researchers identified a total of 1408 abstracts with relevance to the four key questions. Of these, they retained and pulled 297 articles for complete review. Another 112 articles were excluded from this subset—typically because the study could not be considered CBPR. Ultimately, the EPC investigators reviewed 55 of the 185 retained articles for KQ 1 and 123 articles comprising 60 studies for KQs 2 and 3. [Full names and publications lists for the identified studies can be found in Table 4 of the complete Report.] The researchers reviewed 7 articles for KQ 4. A key limitation of using secondary and tertiary sources to identify CBPR studies is that the studies often do not identify themselves as CBPR.

KQ 1: Definition of Community-based Participatory Research

The EPC researchers sought to answer three important questions in their exploration of this topic:

- *What are the essential elements of CBPR?*
- *What are the "best practices" of CBPR, including the characteristics of successful investigator-community partnerships?*
- *What major outcomes are anticipated from both the research and community perspectives?*

The EPC researchers analyzed 55 conceptual articles (i.e., synthesizing the evolution of, values for, or lessons learned from collaborative research), in the process of writing a deliberately short working definition for CBPR. These articles each used terms common to, or similar to, CBPR. They originated with a variety of fields in the social and health sciences. Using these articles, the researchers were able to arrive at a definition they feel confident will serve the purposes of AHRQ, other Federal agencies supporting CBPR, and other interested parties and agencies:

***Community-based participatory research** is a collaborative research approach that is designed to ensure and establish structures for participation by communities affected by the issue being studied, representatives of organizations, and researchers in all aspects of the research process to improve health and well-being through taking action, including social change.*

To expand upon this definition, the authors further suggest that CBPR involves: (1) *co-learning and reciprocal transfer of expertise*, by all research partners, with particular emphasis on the issues that can be studied with CBPR methods; (2) *shared decisionmaking power*; and (3) *mutual ownership* of the processes and products of the research enterprise.

KQs 2 and 3: Intervention Studies and Outcomes

The EPC researchers found a striking degree of variability in the study designs, substantive concerns, and the extent of community involvement in CBPR studies. Thirty of the 60 studies relevant to these KQs included interventions, while the other 30 were noninterventional studies. For the purposes of this review, researchers defined an intervention as an organized and planned effort to change individual behavior, community norms or practices, organizational structure or policies, or environmental conditions.

KQ 2: Implementation of Community-based Participatory Research

Each of the 60 studies identified as CBPR resulted in an average of two publications. Thirty-five studies produced one published article each; not counting the East Baltimore Health Promotion Study—which lasted 17 years between the first publication and the last—the 24 studies with more than one publication each produced, on average, 3.5 articles over a period of about 2.5 years. The majority (63.6 percent) of the 55 studies giving information on their funding reported a single funding source, while a significant minority (32.7 percent) mentioned two funding sources, and a handful (3.7 percent) report more than two sources.

Quality of Research Methodology. Of the 60 CBPR studies, 30 included ongoing or completed interventions; of these, 12 evaluated the intervention and 18 either had not completed the intervention, or had not evaluated it fully. The remaining 30 studies did not have an intervention or did not report one.

Four of the 12 studies that implemented and evaluated interventions[14,34–44] were randomized controlled trials (RCTs), and five were quasi-experimental studies. The three remaining studies had nonexperimental designs.

Of the 30 studies classified as noninterventional because they were neither designed with an explicit intervention nor did they undertake an evaluation of any intervention that might have resulted from their findings, 10 studies moved beyond problem identification to risk factor assessments, [45–50] examining prevalence, [51,52] and examining the impact of environmental or policy change.[53,54] Increasing community capacity or engendering empowerment as a byproduct of the collaboration, was the major objective in four of the projects.[55–58]

Community involvement in the research process. Sixteen studies documented the involvement of the community in making measurement instruments more culturally relevant, or mentioned field-testing their instruments to improve their reliability. Fourteen studies described the effort to build community partnerships through the use of baseline data, general findings, or process evaluation results. Many of the studies provided rich qualitative and quantitative data regarding the lengthy process of building partnerships between institutions and communities–although formal evaluation of this process was rare.

Regarding evidence in the published literature of the level of community involvement in the research process, 28 of 60 studies (47 percent) involved the community in helping to set priorities and generate hypotheses. The extent of community involvement, however, varied greatly among the studies. Community input was used in some studies to direct change or expand priorities while others used community involvement mainly to confirm their priorities.

Researchers many times took a lead role in proposal development, often applying for grants before the actual community involvement began. Fourteen studies mentioned community involvement in proposal development. Community involvement took place mainly in the form of advisory committees, but there were also examples of partnership steering committees in which community partners were involved as equal partners. In one turn of events, the community approached the researchers to initiate the proposal on the basis of the community's priorities and desired research.

Nineteen studies reported shared funding. Communities used funds mainly to pay for staffing. In one study, the community contributed some of the direct funding (taken from union funds) to maintain the research.

Twenty-eight studies described the active participation of the community in the study design and implementation. Fifty studies reported community involvement with respect to recruiting and participant retention. Contact with community members generally raised participation rates. Local staff helped to administer surveys and conduct interviews, and as survey helpers fluent in the languages of the target group.

Of 30 studies with a planned or implemented intervention, more than 90 percent (28 in all) reported community participation in the intervention design and implementation. Among the 30 studies without a planned intervention, 30 percent (10 studies) reported that community members had participated in the design of future interventions for the community, based on the study results.

Articles reviewed by the EPC investigators made little mention of the involvement of community partners in the data interpretation or manuscript preparation processes. Although some papers included authors without academic degrees, the researchers could not draw firm conclusions about the level of participation by community partners.

The EPC researchers also identified those studies in which communities were involved in translating research findings into policy change. Three of the 60 studies reported demonstrable policy change in civic bodies, as a result of the intervention through the efforts of the community collaborators. Five studies brought about change in private institutions or at local levels through the efforts of community collaborators.

Thirteen studies reported on the sustainability of programs or interventions. An additional 28 studies detailed the integration or application of findings to achieve changes in health or other aspects of daily life. Some projects achieved temporary sustainability of programs through the acquisition of additional grants for further research or by attracting local funding.

KQ 3: Outcomes of Community-based Participatory Research

Improved Research Quality Outcomes. The investigators rated the 12 studies with completed interventions for research quality and for adherence to the principles of community participation. On a scale of 1 to 3, higher scores reflected better quality. The research quality scores reflected study design rigor, with experimental studies rating highest overall. Community participation scores, however, appeared less closely associated with study design. And while the scores on these two performance dimensions are not directly comparable, the average research quality scores ranged from 1.5 to 2.8 with a mean of 2.3, while the community participation quality scores ranged from 1.6 to 3.0 with a mean of 2.2.

When the EPC researchers looked at the influence of community involvement on the quality of interventional studies, they discovered 11 of the 12 completed intervention studies had reported enhanced intervention quality. Just two studies reported improved outcomes, while eight noted enhanced recruitment efforts, four reported improved research methods and dissemination, and three described improved descriptive measures. Very little evidence of diminished research quality resulting from CBPR was reported.

Community and Research Capacity. Of the 60 studies reviewed, 47 reported improved community involvement, including additional grant funding and job creation, as an outcome associated with the study. The authors—typically academics—generally focused on the increased capacity of the participant community, rather than that of the research community.

Health Outcomes. Among the 12 studies evaluating completed interventions that play a role in health outcomes, two dealt with physiologic health outcomes, three with cancer screening behavior, and four addressed other behavioral changes (including alcohol consumption, immunization rates, and safer sex behavior). Finally, three studies measured the impact of the intervention on emotional support, empowerment, and employee well-being.

Given the highly varied health outcomes, measurement strategies, and intervention approaches used, the EPC researchers were unable to perform a direct comparison of studies and their relative impact on health outcomes. Moreover, an absence of cost-effectiveness data precluded any comparison of outcomes from CBPR studies and those of more traditional research studies.

KQ 4: Funding Criteria for Community-based Participatory Research

AHRQ asked the EPC investigators to address several specific questions about CBPR funding, drawing on the lessons learned through the synthesis of the literature on the first three key questions. Specifically:

1. *What current approaches are being used by funders in their efforts to solicit and review CBPR grant proposals?*
2. *What criteria should high quality grant applications possess?*
3. *What guidance can be offered to funding organizations and CBPR applicants?*
4. *Who should be involved in the review process? What should be the role of the community?*

Current Approaches by Funders. The Centers for Disease Control and Prevention and the National Institute of Environmental Health Sciences have been at the forefront of Federal CBPR funding to date. Specific initiatives by these agencies include many of the EPC-reviewed studies. Interest in funding CBPR at the Federal level is growing, given the recent creation of an Interagency Working Group for Community-based Participatory Research. This group has begun assembling information on existing funding mechanisms for CBPR.

Discussions with individuals from the NIH and CDC tasked with generating requests for research proposals on specific topics (Requests for Applications, or RFAs) and administering the review process underscored the need for brief guidance materials (fact sheets) about CBPR for reviewers less familiar with this approach. Guidelines for individuals writing RFAs designed to encourage CBPR submissions and documents providing guidance for researchers submitting CBPR proposals also were recommended.

Criteria for Applications. According to the details of conversations between researchers and funders, the process of obtaining funding for CBPR projects through conventional review mechanisms can be a difficult one. This is often because reviewers are less familiar with (and perhaps even skeptical about) the possibility of integrating high-quality conventional research within the framework of a CBPR collaboration. The EPC researchers identified relatively few high-quality completed interventions or observational studies, relative to what appears to be many excellent collaborations based on CBPR principles.

Guidance for Funding Organizations and Applicants. The researchers created three concise documents providing guidance to funding organizations, reviewers, and applicants, based on the EPC's review, discussions with Federal funding sources, reviews of funding agency Web sites, and the funding criteria outlined above. The EPC elected to employ the same review criteria often used by agencies within the U.S. Department of Health and Human Services in the development of these prototype guideline documents; these criteria are both standardized and rigorous. These documents (CBPR Exhibits 1, 2, and 3) are available on the RTI Web site (http://www.rti.org).

Involvement in the Review Process. Discussions with funding providers and their review of the literature led EPC investigators to recommend the inclusion of academic experts for the content area, and for CBPR methods, on project application review panels. Moreover, they recommended involving individuals with expertise in both arenas. The researchers further suggested the potential value of including community representatives, but emphasized the need to orient and structure the review panels to immediately and effectively tap into the expertise of the community representatives.

Discussion

Implementing CBPR

Research Quality. Authors of interventional studies (whether traditional or CBPR) often must publish their findings and study methodology in separate articles. The nature of CBPR further compounds this fragmentation when years of partnership development and collaboration must be distilled to few words in a small number of journals willing to publish this more descriptive science. This may be why information regarding the implementation of CBPR, both in terms of community participation and the research, often was missing in the EPC-reviewed articles.

A limited number of studies representing a complete and fully evaluated intervention—an observational study or an epidemiologic study that can be generalized beyond the participants involved—have been published to date. Limiting factors appear to be the categorical nature of most Federal funding, funding period length and flexibility, and the page limitations of journals.

There was little evidence to indicate that high-quality scores in community collaboration are associated with low-quality research scores. Recent special journal issues focusing on CBPR have led a number of publications to implement high-quality research methods. CBPR funding initiatives originating with Federal agencies have the potential to do the same.

Level of Community Involvement. Community involvement varied in different stages of the research. There was strong involvement in recruiting study participants, designing and implementing the intervention, and interpreting findings. Many authors argued that community involvement (especially in theses areas) leads to greater participation rates, increased external validity, decreased loss of follow-up, and increased individual and community capacity. The disadvantages of community involvement were not frequently reported, but they may include the introduction of selection bias (bias in recruitment), decreased (and sometimes an absence of) randomization, and the potential selection of highly motivated intervention groups not representative of the broader population.

Achieving Intended Outcomes

Improving Research Quality. In CBPR, researchers must work with the community to select and justify the strongest possible research methods, while balancing research rigor with their responsiveness to the community. The researchers must credit community members with the ability to understand complex research challenges, if presented clearly and thoughtfully. One of the many benefits of making research partners of community members is that they begin to see the long-term gains associated with research, in comparison to the relatively short-term nuisance of data collection activities.

Enhancing Community Capacity. Enhanced community capacity was rarely mentioned in the EPC's review of the literature as an explicit goal of CBPR projects. Rather, it was mentioned in descriptions of the collaborative process and was clearly considered to be a critical component. Studies were much more likely to report capacity building in the community, than in the cadre of researchers or their institutions. Perhaps a true indicator of investigator appreciation for CBPR might be published study results that include a discussion of capacity-building efforts on the part of the researchers.

Improving Health Outcomes. Among the limited number of fully evaluated, complete interventions that were identified, the stronger or more consistently positive health outcomes generally were found in the higher quality research designs. This should convince CBPR research partnerships to pay adequate attention to the "R" component of CBPR.

Given the long-term nature of true CBPR efforts, individual and community capacity-building efforts ultimately may result in positive health outcomes that have little or nothing to do with those targeted in the initial study. None of the studies reviewed could accurately predict such long-term and indirect potential benefits of CBPR.

Funding Issues

Because CBPR is a potential approach to translational research, the EPC researchers have suggested using peer review groups with a background in translational research or research dissemination to consider the merits of grant proposals for this type of research. Conversely, peer review by conventional mechanisms rather than special emphasis panels has the potential to expand the options for funding CBPR efforts, while at the same time educating other scientists on the potential rigor and "added value" of CBPR. A proposal based on CBPR should not simply describe CBPR criteria–it should also discuss the potential benefits for the research quality and for the community.

Future Research

In many areas of health promotion and disease prevention, researchers and community advocates alike are beginning to focus their efforts further “upstream” in the socio-ecologic model, encouraging a greater emphasis on policy and environmental changes that facilitate proactive health choices at the individual level. CBPR is well positioned to address such approaches to health promotion through its ability to mobilize community action. Continued efforts aimed at achieving the best possible balance between research methodologies and community collaboration are critical to advancing the field.

The EPC investigators anticipate a significant increase in high-quality CBPR coverage in the near future, due in part to a number of recent Federal initiatives funding CBPR projects and a willingness on the part of respected journals to publish the findings. Along with proposed CBPR proposal-writing and peer-review guidelines, the investigators also have suggested that recommendations may be needed to improve the quality of CBPR study reports. These guidelines would reflect the increasing rigor required of authors in the evidence-based practice field, while at the same time acknowledging the unique situation facing those researchers who are balancing research rigor with a commitment to community collaboration.

Availability of the Full Report

The full evidence report used to create this summary was prepared for the Agency for Healthcare Research and Quality by the RTI–University of North Carolina Evidence-based Practice Center under Contract No. 290-02-0016. It is expected to be available late in the summer of 2004. At that time, printed copies may be obtained free of charge from the AHRQ Publications Clearinghouse by calling (800)-358-9295. Inquiries should include a request for Evidence Report/Technology Assessment No. 99, *Community-based Participatory Research: Assessing the Evidence*. In addition, Internet users will be able to access the report and this summary online through AHRQ’s Website at www.ahrq.gov.

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References

1. Institute of Medicine, Committee for the Study of the Future of Public Health, Division of Health Care Services. The Future of Public Health. Washington, D.C.: National Academy Press, 1988.
2. Green LW, Mercer SL. Can public health researchers and agencies reconcile the push from funding bodies and the pull from communities? Am J Public Health 2001; 91(12):1926-9.
3. Olden K, Guthrie J, Newton S. A bold new direction for environmental health research. Am J Public Health 2001; 91(12):1964-7.
4. O’Neill EH. Health Professions education in the Future: Schools in Service to the Nation. San Francisco, Ca: Pew Health Professions Commission, 1993.
5. Cassel JC. The contribution of social environment to host resistance. Am J Epidemiol 1976; 104:107-23.
6. Satel S. The indoctrinologists are coming. Atlantic Monthly 2001; 59-64.
7. Kaplan CD. What works in drug abuse epidemiology in Europe. J Addict Dis 1991; 11(1):47-59.
8. Berg A. Sliding toward nutrition malpractice: time to reconsider and redeploy. Am J Clin Nutr 1993; 57(1):3-7.
9. Mittelmark MB, Hunt MK, Heath GW, et al. Realistic outcomes: lessons from community-based research and demonstration programs for the prevention of cardiovascular diseases. J Public Health Policy 1993; 14(4):437-62.
10. Aguirre-Molina M, Gorman DM. Community-based approaches for the prevention of alcohol, tobacco, and other drug use. Annu Rev Public Health 1996; 17:337-58.
11. Israel BA, Schulz AJ, Parker EA, et al. Review of community-based research: assessing partnership approaches to improve public health. Annu Rev Public Health 1998; 19:173-202.
12. Davis SM, Reid R. Practicing participatory research in American Indian communities. Am J Clin Nutr 1999; 69(4 Suppl):755S-9S.
13. Schensul SL. Science, theory and application in anthropology. Am Behav Scient 1985; 29:164-85.
14. Israel BA, Schurman SJ, House JS. Action research on occupational stress: involving workers as researchers. Int J Health Serv 1989; 19(1):135-55.
15. Hall BL. From margins to center? The development and purpose of participatory research. Am Sociol 1992; 23(15-28).
16. Himmelman AT . Communities Working Collaboratively for a Change. Minneapolis, MN: Humphrey Institute for Public Affiars: University of Minnesota, 1992.
17. Butterfoss FD, Goodman RM, Wandersman A. Community coalitions for prevention and health promotion. Health Educ Res 1993; 8(3):315-30.
18. Altman DG. Sustaining interventions in community systems: on the relationship between researchers and communities. Health Psychol 1995; 14(6):526-36.
19. Schensul JJ, Denelli-Hess D, Borreo MG, et al. Urban comadronas: Maternal and child health research and policy formulation in a Puerto Rican community. In: Stull DD, Schensul JJ, eds. Collaborative Research and Social Changes: Applied Anthrology in Action. Boulder, Col: Westview Press, 1987.

20. Brown P. The role of the evaluator in comprehensive community initiatives. In: Connel JP, Kubisch AC, Schorr LB, Weiss CH, eds. New Approaches to Evaluating Community Initiatives. Washington, DC: Aspen, 1995.
21. Cousins JB, Earl LM, eds. Participatory Evaluation: Studies in Evaluation Use and Organizational Learning. London: Falmer, 1995.
22. Schulz AJ, Parker EA, Israel BA, et al. Conducting a participatory community-based survey: Collecting and interpreting data from a community health intervention on Detroit's East Side. J Public Health Manag Pract 1997; 4(2):10-24.
23. Vega WA. Theoretical and pragmatic implications of cultural diversity for community research. Am J Comm Psychol 1992; 20:375-91.
24. Dressler WW. Commentary on "Community research: Partnership in Black communities". J Prev Med 1993; 9:31-4.
25. Gaventa J. The powerful, the powerless, and the experts: Knowledge struggles in an information age. In: Park P, Brydon-Miller M, Hall B, Jackson T, eds. Voices of Change: Participatory Research in the United States and Canada. Westport, CT: Bergin, Garvey, 1993.
26. Elden M, Levin M. Natural Helper Models to Enhance a Community's Competence. In: Whyte WF, ed. Participatory Action Research. Newbury Park, CA: Sage, 1994.
27. Bishop R. Addressing issues of self-determination and legitimation in Kaupapa Maori research. In: Webber B, ed. Research Perspectives in Maori Education. Wellington, New Zealand: Council on Education Research, 1996.
28. deKoning K, Martin M. Participatory research in health: Setting the context. In: deKoning K, Martin M, eds. Participatory Research in Health: Issues and Experiences. London: Zed Books, 1996.
29. Maguire P. Considering more feminist participatory research: What's congruency got to do with it? Qual Inq 1996; 2:106-18.
30. Conference on Community-based Participatory Research — Conference Minutes [Web Page]. Available at http://www.ahcpr.gov/about/cpcr/cbpr/.
31. Israel BA, Lichtenstein R, Lantz P et al. The Detroit Community-Academic Urban Research Center: development, implementation, and evaluation. J Pub Health Manag Pract 2001; 7(5):1-19.
32. Higgins DL, Maciak B, Metzler M, CDC Urban Research C. CDC Urban Research Centers: community-based participatory research to improve the health of urban communities. J Womens Health Gend Based Med 2001; 10(1):9-15.
33. Higgins DL, Metzler M. Implementing community-based participatory research centers in diverse urban settings. J Urban Health 2001; 78(3):488-94.
34. Wagenaar AC, Murray DM, Wolfson M, et al. Communities Mobilizing for Change on Alcohol: Design of a Randomized Community Trial. J Comm Psychol 1994; Special Issue:79-101.
35. Green LW, Levine DM, Deeds S. Clinical Trials of Health Education for Hypertensive Outpatients: Design and Baseline Data. Prev Med 1975; 4:417-25.
36. Lam TK, McPhee SJ, Mock J, et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. J Gen Intern Med 2003; 18(7):516-24.
37. Angell KL, Kreshka MA, McCoy R, et al. Psychosocial intervention for rural women with breast cancer. J Gen Intern Med 2003; 18(7):499-507.
38. Flaskerud JH, Nyamathi AM, Uman GC. Longitudinal effects of an HIV testing and counseling programme for low-income Latina women. Ethn Health 1997; 2(1-2):89-103.
39. Masi CM, Suarez-Balcazar Y, Cassey MZ, et al. Internet access and empowerment: a community-based health initiative. J Gen Intern Med 2003; 18(7):525-30.
40. Wismer BA, Moskowitz JM, Min K, et al. Interim assessment of a community intervention to improve breast and cervical cancer screening among Korean American women. J Public Health Manag Pract 2001; 7(2):61-70.
41. Daniel M, Green LW, Marion SA, et al. Effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada. Soc Sci Med 1999; 48(6):815-32.
42. Matsunaga DS, Enos R, Gotay CC, et al. Participatory research in a Native Hawaiian community. The Wai'anae Cancer Research Project. Cancer 1996; 78(7 Suppl):1582-6.
43. Rosenberg Z, Findley S, McPhillips S, et al. Community-based strategies for immunizing the "hard-to-reach" child: the New York State immunization and primary health care initiative. Am J Prev Med 1995; 11(3 Suppl):14-20.
44. Stevens PE, Hall JM. Participatory action research for sustaining individual and community change: a model of HIV prevention education. AIDS Educ Prevent 1998; 10(5):387-402.
45. McCauley LA, Lasarev MR, Higgins G, et al. Work characteristics and pesticide exposures among migrant agricultural families: a community-based research approach. Environ Health Perspect 2001; 109(5):533-8.
46. Lauderdale DS, Kuohung V, Chang SL, et al. Identifying older Chinese immigrants at high risk for osteoporosis. J Gen Intern Med 2003; 18(7):508-15.
47. Ledogar RJ, Acosta LG, Penchaszadeh A. Building international public health vision through local community research: the El Puente-CIET partnership. Am J Public Health 1999; 89(12):1795-7.
48. Adrien A, Godin G, Cappon P, et al. Overview of the Canadian study on the determinants of ethnoculturally specific behaviours related to HIV/AIDS. Can J Public Health 1996; 87 Suppl 1:S4-10.
49. Mullings L, Wali A, McLean D et al. Qualitative methodologies and community participation in examining reproductive experiences: the Harlem Birth Right Project. Matern Child Health J 2001; 5(2):85-93.
50. Parsons ML, Warner-Robbins C. Factors that support women's successful transition to the community following jail/prison. Health Care Women Int 2002; 23(1):6-18.
51. Stratford D, Chamblee S, Ellerbrock TV, et al. Integration of a participatory research strategy into a rural health survey. J Gen Intern Med 2003; 18(7):586-8.
52. Stratford D, Chamblee S, Ellerbrock TV, et al. Integration of a participatory research strategy into a rural health survey. J Gen Intern Med 2003; 18(7):586-8.
53. Wing S, Wolf S. Intensive livestock operations, health, and quality of life among eastern North Carolina residents. Environ Health Perspect 2000; 108(3):233-8.
54. Vander Stoep A, Williams M, Jones R, Green L, Trupin E. Families as full research partners: what's in it for us? J Behav Health Serv Res 1999; 26(3):329-44.
55. Sloane DC, Diamant AL, Lewis LB, et al. Improving the nutritional resource environment for healthy living through community-based participatory research. J Gen Intern Med 2003; 18(7):568-75.

56. el-Askari G, Freestone J, Irizarry C, et al. The Healthy Neighborhoods Project: a local health department's role in catalyzing community development. Health Educ Behav 1998; 25(2):146-59.
57. Yoshihama M , Carr ES. Community Participation Reconsidered: Feminist Participatory Action Research With Hmong Women . J Comm Pract 2002; 10(4):85-103.
58. Choudhry UK , Jandu S, Mahal J, Singh R, Sohi Pabla H, Mutta B. Health promotion and participatory action research with South Asian women. J Nurs Scholarsh 2002; 34(1):75-81.

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Chapter 1. Introduction

Background

Community-based participatory research (CBPR), as an approach to enhance both research and population outcomes, has received increased attention as the academic and public health communities struggle to address the persistent problem of disparities in the use of health care and health outcomes for several populations, including those identified by diagnosis, socioeconomic status, lack of health insurance, and membership in various racial and ethnic groups.[1-6] Few guidelines exist to indicate how research proposals should be evaluated and what resources are required to promote successful efforts. Even less is known about the degree to which a CBPR approach has been effective in sustaining long-term academic-community partnerships and generating high-quality data to guide the research agenda. Experts are growing impatient with the gap between knowledge produced through conventional research and translation of this research into interventions and policies to improve the health of immigrants and racial or ethnic minorities.[2,7-12]

For public health practitioners, the challenge of sustainable behavior change is compounded by long-standing social and historical conditions of inequality embedded in the very fabric of society.[10] For researchers, this broad range of external forces jeopardizes the stability of observations. Consequently, concepts such as external comparisons and generalization to some idealized population, as used in inferential statistics, may make only limited sense.[13] For immigrants and racial or ethnic minorities, historic mistrust of the health care system and research compromises the ability of researchers and health practitioners to identify and address their health needs.[14-16]

Given these challenges, the significance of an approach that builds the capacity of *communities to function as co-investigators* with health agencies and academic institutions before, during, and after the research process has re-emerged. The assumption is that such an approach will engender greater commitment among all research partners to uncovering social and behavioral determinants of health and to developing innovative, long-term interventions. As yet, no clear consensus exists in public health and health services research to answer the question, “What constitutes a community?” “Whose participation is to be solicited and incorporated?” and “What evidence is needed for whom on ‘best practices’ of community-based participatory research?” Also needed are mechanisms for research evaluation and funding that promote optimal collaboration among communities, health agencies, and academic institutions for identifying and modifying research priorities within populations disenfranchised from the political and health policymaking process.

Community-based Participatory Research: Defining the Approach

CBPR has been proposed as an approach that combines research methods and community capacity-building strategies to bridge the gap between knowledge produced through research and translation of this research into interventions and policies.[2,7,9-12,17-20]

CBPR's distinction from other community-based research approaches, which view "community" as a setting or location, is the recognition of community as a social entity with a sense of identity and shared fate. Working *with* rather than *in* communities, CBPR attempts to strengthen a community's problem-solving capacity through collective engagement in the research process. The seminal review of community-based research literature by Israel and colleagues[11] defines CBPR as "[a] collaborative approach to research that equitably involves, for example, community members, organizational representatives, and researchers in all aspects of the research process. The partners contribute unique strengths and shared responsibilities to enhance understanding of a given phenomenon and the social and cultural dynamics of the community, and integrate the knowledge gained with action to improve the health and well-being of community members" (p. 177).

In their review of participatory research studies,[21-23] Green and colleagues offer the following definition:[23] "Participatory research is systematic inquiry, with the collaboration of those affected by the issue being studied, for purposes of education and taking action or effecting social change" (p. 194). Using their own findings, this Canadian group developed a set of criteria for evaluating research proposals[23] that we have adapted and propose to refine further to apply to articles in our evidence tables. Green and colleagues defined community[23] as "any group of individuals sharing a given interest; this definition includes cultural, social, political, health, and economic issues that may link together individuals who may or may not share a particular geographic association. This definition also includes the traditional concept of community as a geographic entity" (p. 186). Although many researchers and practitioners offer definitions and descriptions of community and CBPR, no clear consensus has emerged to move the field forward during a time when interest is growing rapidly.[24-30]

Nevertheless, common themes are that the CBPR approach (a) recognizes the importance of social, political, cultural, and economic systems to health behaviors and outcomes; (b) engages community members in choosing research topics, developing projects, collecting data, and interpreting results; (c) emphasizes both qualitative and quantitative research methods; and (d) puts high priority on translation of the findings of basic, intervention, and applied research into changes in practice and policy. More difficult to prescribe, however, is the degree to which each of these criteria must be fulfilled to satisfy the elements of CBPR.

Community-based Participatory Research: Clarifying the Benefits

Done properly, CBPR should benefit community participants, practitioners, and researchers alike. CBPR creates bridges between scientists and communities, allowing both to gain in knowledge and experience.[31-35] This collaboration assists in developing culturally appropriate measurement instruments, thus making projects more effective and efficient.[36,37] Finally, CBPR establishes a level of trust that enhances both the quantity and the quality of data collected.[31,38-40]

The ultimate benefit is the prospect of examining the community's own unique circumstances to test and adapt best practices to its own needs.[2,31,33,36,41-47]

Production of This Evidence Report

Assessing the Need

In November 2001, the Agency for Healthcare Research and Quality (AHRQ), in collaboration with several Federal agencies and the W.K. Kellogg Foundation, convened a 2-day conference "to promote and support the use of CBPR, to develop strategies to advance CBPR, and to explore the use of CBPR as a resource for policymakers to help guide their program development."[48] AHRQ organized the meeting specifically to address three key barriers to CBPR: (1) poor community incentives and capacity to be partners in CBPR projects; (2) poor academic incentives and capacity for researchers to act as partners in CBPR projects; and (3) inadequate funding and insensitive funding mechanisms.

Conference participants, through working groups and extensive discussion, produced three sets of recommendations aimed at funders, community members, and academics. The information generated is to be used to "describe the current context or environment for CBPR, to develop strategies to promote CBPR, and to provide funding organizations with input from communities as they work together to improve the health and well-being of those in communities."[48] Among the recommendations was a request that an AHRQ Evidence-based Practice Center (EPC) synthesize evidence on the conduct and evaluation of CBPR. A national group could then use such a review as the basis for CBPR guidelines with the following anticipated benefits: enhanced stature for CBPR; guidance to potential partners entering into CBPR projects; and improved assessment criteria and mechanism for funders to review CBPR proposals.

AHRQ awarded this evidence report to the RTI International–University of North Carolina Evidence-based Practice Center (RTI–UNC EPC). Our systematic review consolidates and analyzes the body of literature that has been produced to date on CBPR in several areas relating to the following key questions:

- What defines community-based participatory research?
- How has CBPR been implemented to date with regard to the quality of research methodology and community involvement?
- What is the evidence that CBPR efforts have resulted in intended outcomes?
- What criteria and processes should be used for review of CBPR in grant proposals?

Expected Audiences

The RTI–UNC EPC team anticipates that its report and subsequent publications will assist several audiences. Community leaders interested in initiating research projects will find guidance on expectations of what a true collaboration might look like, including their obligations as research partners. Public health and health services researchers and practitioners new to

CBPR will gain insights into their obligations as partners with communities in research. Funders in both Federal and foundation arenas will find criteria that they can use to evaluate CBPR proposals.

Organization of the Report

Chapter 2 describes our methods, including key questions and analytic framework, our search strategies and inclusion/exclusion criteria, and our approach to grading the quality of articles and rating the strength of evidence. In Chapter 3, we present the results of our literature search and synthesis of retained articles. Chapter 4 further discusses the findings and offers our recommendations for future research. Our references and included studies and a listing of excluded studies follow Chapter 4. Appendixes include a detailed description of our search strings (Appendix A), an example of our quality assessment form (Appendix B), detailed evidence tables (Appendix C), peer reviewers (Appendix D), and suggested guidelines for funders and applicants (Appendix E). **Note:** Appendixes and Evidence Tables cited in this report are provided electronically at http://www.ahrq.gov/clinic/epcindex.htm.

Chapter 2. Methods

In this chapter, we document the procedures that the RTI International–University of North Carolina Evidence-based Practice Center (RTI–UNC EPC) used to develop this comprehensive evidence report on community-based participatory research (CBPR). To set the framework for the review, we first discuss our analytic framework and then briefly describe the preliminary expert meeting, our Technical Expert Advisory Group (TEAG), and their suggested changes to the analytic framework and key questions. We describe our strategy for identifying articles relevant to our key questions, our inclusion/exclusion criteria, and the process we used to abstract relevant information from the eligible articles and generate our evidence tables. We also discuss our criteria for grading the quality of individual articles and the strength of the evidence as a whole. Finally, we present our approach to collecting information about CBPR funding and explain the peer review process.

Analytic Framework

CBPR is a research approach that can be applied to a variety of study designs addressing a wide range of health outcomes. For that reason alone, no one diagram can illustrate all possible causal pathways. Thus, our analytic framework (depicted in Figure 1) documents the primary elements of most studies (study design, measurement, intervention, data analysis); the traditional research approaches associated with these elements; and what is added to this mix through the use of CBPR. We also note the hypothesized benefits of CBPR to the research process.

Table 1 elaborates potential benefits of CBPR to the community and some of the research challenges associated with CBPR. The analytic framework and table reflect the most comprehensive picture of CBPR developed to date, including identifying the health concern, developing a measurement system, and testing an intervention, but, as expected, only a limited number of empirical studies tend to include all these elements.

Preliminary Expert Meeting

In November 2002, the RTI–UNC EPC convened a group of experts including some members of our TEAG (see Appendix D[*]) to provide early guidance on our work. This group discussed key issues and audiences for the CBPR report; defined clear and appropriate research questions and set some priorities on those questions. This allowed us to target our literature search and helped us to identify appropriate databases and other resources for this systematic review. In particular, we presented draft key questions to the expert meeting attendees. Based

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[*] **Note:** Appendixes and Evidence Tables cited in this report are provided electronically at http://www.ahrq.gov/clinic/epcindex.htm.

on their feedback and on additional comments from our TEAG in later conversations, we revised these questions further to create the set that guided the remainder of our work.

We presented the analytic framework at our expert meeting. In reviewing the framework, the meeting attendees listed several common elements of CBPR, participatory action research (PAR), action research (AR), or participatory research (PR) that they advised us to take into account. These common elements included

- jointly identifying research priorities with the community,
- a higher level of involvement from both the researcher and the community,
- promoting social change,
- guiding partnerships across sites,
- co-education/co-learning across researchers and communities,
- community health indicators,
- generating instrumental and practical knowledge,
- an increased focus on process, and
- power-sharing between the researcher and the community.

Adding to the complexity of our work was the fact that our preliminary searches had suggested that community-based and participatory approaches to research might not be classified as CBPR. Expert panel members (including our TEAG) shared our concern about the extent to which key terms are inconsistently assigned to articles when they are indexed in commonly used databases. They listed several terms apart from CBPR, participatory action research, action research, or participatory research that imply involvement in the community. These terms include action science, collaborative inquiry, partnership research, and empowerment evaluation.

We also employed the expertise of the TEAG throughout the process. A brief description of the TEAG is presented below.

Role of the Technical Expert Advisory Group

The TEAG represented 11 CBPR experts who provided assistance throughout the project. The TEAG members brought diverse perspectives to this review from their work as community research partners, and academic researchers. As in all such systematic reviews, the TEAG was expected to contribute to AHRQ's broader goals of (1) creating and maintaining science partnerships as well as public-private partnerships and (2) meeting the needs of an array of potential customers and users of its products. Thus, the TEAG was both an additional resource and a sounding board during the project.

To ensure robust, scientifically relevant work, we called on the TEAG to react to work in progress and advise us on substantive issues or possibly overlooked areas of research. TEAG members participated in conference calls and discussions through e-mail to

- refine the analytic framework and key questions at the beginning of the project;
- discuss the preliminary assessment of the literature, including inclusion/exclusion criteria; and

- provide input on the information and categories included in evidence tables.

Because of their extensive knowledge of this topic and their active involvement in CBPR, we also asked TEAG members to participate in the external peer review of the draft report.

Key Questions

Using these inputs, we arrived at a final set of key questions, presented below, to guide the literature searches and synthesis. Table 2 presents the four key questions (KQ 1 through 4) along with their subparts.

KQ 1. What defines CBPR?

KQ 2. How has CBPR been implemented to date with regard to the quality of research methodology and community involvement?

KQ 3. What is the evidence that CBPR efforts have resulted in the intended outcomes?

KQ 4. What criteria and processes should be used for review of CBPR in grant proposals?

Literature Search Strategy

Inclusion and Exclusion Criteria

Based on the final key questions specified following the expert meeting and further discussions with our TEAG, we generated a list of inclusion and exclusion criteria for each key question. Generally, we included human studies; all ages and both sexes, English language only; and studies done in the United States and Canada (English-speaking North America). We included a broader set of international studies for purposes of describing the history and definition of CBPR, but systematically reviewing empirical studies conducted in vastly different sociocultural and political climates would have far exceeded the scope of this effort.

Exclusion criteria (apart from the obverse of the above) included editorials, letters, and commentaries; articles that did not report information related to the key questions; and studies that did not provide sufficient information to be abstractable. We identified several manuscripts that were limited to descriptions of CBPR processes and partnership development that did not include sufficient information on projects or outcomes; we also excluded these studies from our review.

On the advice of our TEAG and based on our cumulative definition of CBPR, we elected to limit our review to studies that defined community at the level of study participants; thus, we excluded studies that used participatory techniques to involve health professionals in the research process. For example, an extensive body of research in the literature addresses participatory action research as a method to include and empower nurse professionals in continuing education and career development.[49,50] Likewise, many studies involve physicians and other health care professionals in the process of identifying barriers to health care delivery and testing intervention approaches to address these barriers.[51,52] Although these types of investigations represent an important approach to involving those who can both improve the research process and enhance the potential for implementing findings, we elected to narrow our review to participatory research involving primarily community members, worksite employees, and other individuals not involved with the health care delivery process.

We did not restrict the search by date of publication. The last of our systematic searches was conducted on March 3, 2003. After that date, we continued to search for citations that were necessary to provide a complete overview of studies that we had already identified through our systematic searches and TEAG suggestions. We performed these latter searches on individual author names or study names (or both), mainly during the process of data abstraction. We were also able to obtain advance copies of articles to be published in a special issue of the *Journal of General Internal Medicine* focusing on CBPR, which appeared in July 2003.

Relevant Data Sources

For KQ 1, 2, and 3, we used three strategies to include all the current valid research related to the key questions: systematic searches based on search terms and author names, consultation with the TEAG, and hand searches of reference lists. First, we searched standard electronic databases such as MEDLINE®, Cochrane Collaboration resources, PsycInfo, and Sociofile using specified search terms. Based on the inclusion/exclusion criteria above and the additional key terms identified by our expert meeting attendees, we generated a list of Medical Subject Heading (MeSH) search terms (Table 3). The TEAG reviewed these terms to ensure that we were not missing any critical areas and suggested additional searches on specific authors and studies. We included these names in our systematic search strategy below. This list represents our collective decisions on the MeSH terms to use for all searches.

Second, we consulted with the TEAG about any studies that were under way but not yet published. Key among the sources of information identified through the TEAG was the special CBPR issue of the *Journal of General Internal Medicine* (July 2003). This publication date was relatively late in our abstraction process, so we were concerned that we would miss this important source of literature. Fortunately, we were able to obtain and abstract data from these journal articles before they were published.

Third, we conducted hand searches of the reference lists of relevant articles to ensure that we did not miss any relevant studies that we had not identified through our MeSH terms. In conducting systematic reviews, we often find it necessary to pull additional articles to gain full information about a particular study. The CBPR literature represents an extreme case of this situation.

Because CBPR work requires long-term and deliberate collaborations before, during, and perhaps after a research project, this process often results in numerous articles through which the investigators describe their methods and results. This phenomenon is exacerbated by journal limitations on length of submissions, which tends to promote fragmentation of the work into multiple articles. Our original search terms often did not capture these additional citations because the authors do not specifically use CBPR or related terminology in describing their efforts. Moreover, in some cases, we determined that we missed relevant (sets of) articles because they simply had never been categorized or indexed as relating to CBPR at all, evidently because the investigators did not refer to their CBPR methodology. We were able to identify them only from *review* articles relating to CBPR. The review articles were especially important because they often included extensive, completed, often well-funded projects that covered a wide array of CBPR elements of the type we needed to examine in this evidence report (e.g., those of the Urban Research Centers).

For KQ 4, we compiled any peer-reviewed publications that could contribute to the research questions. Very few articles directly addressed CBPR funding issues *per se*;[53] rather, the materials we found tended to describe funding mechanisms for CBPR, such as Urban Research Centers funded by the Centers for Disease Control and Prevention (CDC)[54-58] and the Environmental Justice funding mechanism of the National Institute of Environmental Health Sciences (NIEHS).[59] We also reviewed the Web sites for several funding agencies supporting CBPR, talked with Federal staff involved with the Interagency Working Group for Community-based Participatory Research,[60] and interviewed individuals at the CDC and National Institutes of Health (NIH) who were involved with developing CBPR Requests for Applications (RFAs) and the grant review process more generally.

Literature Search Results

Across the four key questions, we identified a total of 650 abstracts for review through our systematic searches. We identified an additional 599 abstracts by using names and search phrases suggested by our expert meeting attendees and TEAG. While reviewing these abstracts, we identified 159 additional citations through hand searches that we considered necessary to decide whether the study qualified for inclusion in our review. Finally, we retained and pulled 298 articles for complete review and excluded 113 studies.

A common reason for exclusion was that the study was a review article listing several CBPR studies, with insufficient information on any individual study to be included in an evidence table. Another frequent reason for exclusion was that, on review, the study did not have sufficient elements of community involvement and/or research to be considered CBPR. Other reasons for exclusion included lack of relevance to the topic (for instance, not health related), or unabstractable information (as with process evaluations that focus on participatory processes with no details on research collaborations) [see: list of Excluded Articles, page 107].

Ultimately, we retained 55 articles for KQ 1; we were unable to obtain three identified articles through interlibrary loan requests or Web searches. For KQ 2 and 3, we identified 123 articles that constituted 60 studies. For KQ 4, we used 7 articles to inform the results and discussion.

Of the 123 articles identified for KQ 2 and 3, a sizable proportion (55 articles or 45%) were identified through hand searches. A key limitation of employing secondary and tertiary sources to identify CBPR studies is that these studies are often not self-identified as CBPR. Although a separate review article may have mentioned elements of their participatory approach, the authors may not have intended to conduct a full-fledged CBPR study. For these studies, evaluation against elements of a CBPR scale is perhaps unfair and creates unnecessary inconsistencies among the pool of included studies.

Therefore, we chose to limit our reliance on hand searches by considering citations relevant only to the intervention mentioned in the article originally obtained through our systematic searches. For instance, in the case of the Health is Gold! study, several other interventions had been conducted as well, but we chose to limit review of these citations to the intervention identified in the July 2003 issue of the *Journal of General Internal Medicine*. Using this strategy prevented an exponential expansion in our scope of work while still allowing us to capture a larger pool of studies. In addition, it brought some degree of consistency to the studies included in the final analysis, in that all the studies were identified by CBPR or related key words. As a consequence of this strategy, however, we cannot claim this review to be exhaustive.

An additional limitation of this review is that it necessarily depends on results having been reported in peer-reviewed publications. Articles that focus on process evaluation may not provide any details on study design and methodology. Conversely, articles focusing on study outcomes may choose either not to report the CBPR process or to report it only partially, depending on the focus of the journal article and limitations on length. Furthermore, no clearly established standards for reporting CBPR elements exist. Given the great variability of reporting, we are able to provide only information on whether these elements were reported; their absence cannot be taken as proof that the study did not incorporate these elements. By the same token, the relative absence of negative findings in this report is likely to be attributable to a form of publication bias, in which unsuccessful collaborations are rarely reported.

Data Collection and Assessment

KQ 1 through 3 differ from KQ 4 in several ways, including the underlying conceptual issues and the purposes to which the eventual searches and syntheses will be put. For that reason, we discuss some aspects of our methods separately for KQ 1 through 3 and for KQ 4.

For KQ 1, 2, and 3, the data collection process involved abstracting relevant information from the eligible articles and generating summary evidence tables that present the key details and findings for the articles. Trained abstractors were paired with the Study Director, Meera Viswanathan, PhD, or with one of the Co-Scientific Investigators, Eugenia Eng, DrPH, or Alice Ammerman, PhD, RD, or with Carmen Samuel-Hodge, PhD, MPH, RD.

Designing Abstraction Procedures

We employed our analytic framework and feedback from the expert meeting and TEAG to guide development of our abstraction tables (see Appendix B[*]), which we designed to

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[*] **Note:** Appendixes and Evidence Tables cited in this report are provided electronically at http://www.ahrq.gov/clinic/epcindex.htm.

approximate the final evidence tables as closely as possible. We also used the framework and feedback to guide the quality rating system (described below). We divided both the abstraction tables and quality ratings into primary research and primary community-based participatory elements. In this way, we were able to describe the studies more fully and evaluate the research and community participation elements separately rather than forcing community participation elements into research methodology categories.

For KQ 2 and 3, because of the multiplicity of articles from a single study, the first step in data collection required grouping articles by study. The Study Director reviewed all articles marked for inclusion and grouped them by study and then sent all articles relating to a single study to our abstractors. Abstractors sometimes identified additional articles necessary to complete the evidence table, and they also recommended articles for exclusion. The abstracts also determined whether the group of articles related to multiple interventions (listed under the same study name) and, if so, forwarded queries to the senior reviewer to select the relevant intervention for abstraction. Once we had compiled a complete set of articles pertaining to a single study, the abstractors keyed the data into an evidence table. The senior reviewer paired with the abstractor performed quality control assessments by reviewing each of the evidence tables against the original articles and making revisions where needed.

Training Abstractors

All abstractors attended two training sessions. At the first session, we explained the process and goals of data abstraction; we then sent the abstractors home with an article to review. We reconvened the group and, through a review of the test article, ensured that the abstractors understood what was expected of them. At that time, we determined that the abstractors were able to abstract the data as required and began the data abstraction process. The Research Coordinator monitored progress and routed the data abstractors’ questions or issues to the Study or Co-Scientific Directors.

Developing Data Abstraction Forms

For KQ 1, one of the Scientific Directors (EE) took sole responsibility for generating a data abstraction form, and it formed the basis for the respective evidence table. For KQ 2 and 3, the Study Director (MV) and the Co-Scientific Directors (EE, AA) together created a single form that served as a data abstraction form as well as the template for the respective evidence tables. We revised and refined the form through multiple rounds of pretesting on different articles spanning the entire range of interventions to ensure that it would adequately capture all relevant issues. We solicited feedback from the data abstractors during training to refine further these various forms.

Developing Evidence Tables and Preparing the Draft Evidence Report

The two final evidence tables are found in their entirety in Appendix C.[*] The first covers evaluated interventions and the second interventions either not completed or not evaluated. Entries are sorted by study design and then listed alphabetically by their study names. When articles gave no "official" study names, we used the key focus of the study. Entries in the evidence table may combine information from multiple articles to provide more complete information on a given study. A list of abbreviations used in the tables appears at the beginning of the appendix.

Grading the Quality of Individual Articles and Rating the Strength of the Evidence

We also developed forms to guide our evaluations of the quality of individual articles in this literature and the degree to which investigators had implemented CBPR principles in their research. Specifically, we developed two quality rating forms: one related to research quality that drew on previous work of the RTI–UNC EPC[61,62] and the other rated the quality of collaboration with a community.

CBPR reflects significant diversity in outcomes, research methodology, and measures. Thus, we elected to grade the quality of only two types of studies (often represented by a set of published articles): (1) those that represented a completed intervention study and (2) those that represented an observational study that was not limited to a baseline needs assessment, but rather was designed to allow extrapolation to a broader population. While this limits the scope of the research graded for quality, it allows application of a consistent set of research criteria.

We tested several drafts of our quality grading instruments and revised them numerous times to assure that they captured the desired information. The final grading forms can be found in Appendix B. Research elements of intervention studies were grouped into the following nine categories: (1) the research question, (2) study population and external validity, (3) control/comparison group, (4) intervention, (5) internal validity and intervention fidelity, (6) primary outcome measures, (7) statistical analysis, (8) blinding, and (9) funding source. CBPR elements rated included the following 10 dimensions: (1) selection of research question, (2) proposal development, (3) financial responsibility for grant funds, (4) study design, (5) recruitment and retention, (6) measurement instruments and data collection, (7) intervention development, implementation, (8) interpretation of findings, (9) dissemination of findings, and (10) application of findings to health concern identified.

One key element of quality grading involves whether the articles or investigators at least disclosed their funding sources, because of the potential for bias associated with the funding source, whether private or public.[62] (An example might be funding from the Dairy Council for a CBPR study promoting milk consumption.) We did not directly include information about

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[*] **Note:** Appendixes and Evidence Tables cited in this report are provided electronically at http://www.ahrq.gov/clinic/epcindex.htm.

funding source in our quality grading scheme, because of the dissimilarity between this element (on the one hand) and items drawn from epidemiology or validated methods research (on the other). In the final evidence report, evidence tables record either the actual funding source or the fact that the investigators did not supply the information in their published articles.

Two senior investigators completed study quality assessments by rating the studies separately, comparing the scores, discussing any discrepancies until these were resolved, and assigning a single score. We assigned a score of “1i” for insufficient information, “1p” for poor, “2” for fair, and “3” for good.

External Peer Review

As is customary for all evidence reports and systematic reviews done for AHRQ, the RTI–UNC EPC requested review of this report from a wide array of outside experts in the field and from relevant professional societies and public organizations. AHRQ also requested review from its own staff and appropriate Federal agencies. We received 13 reviews and revised this final report, as appropriate, on the basis of this feedback.

Figure 1. Analytic framework for community-based participatory research

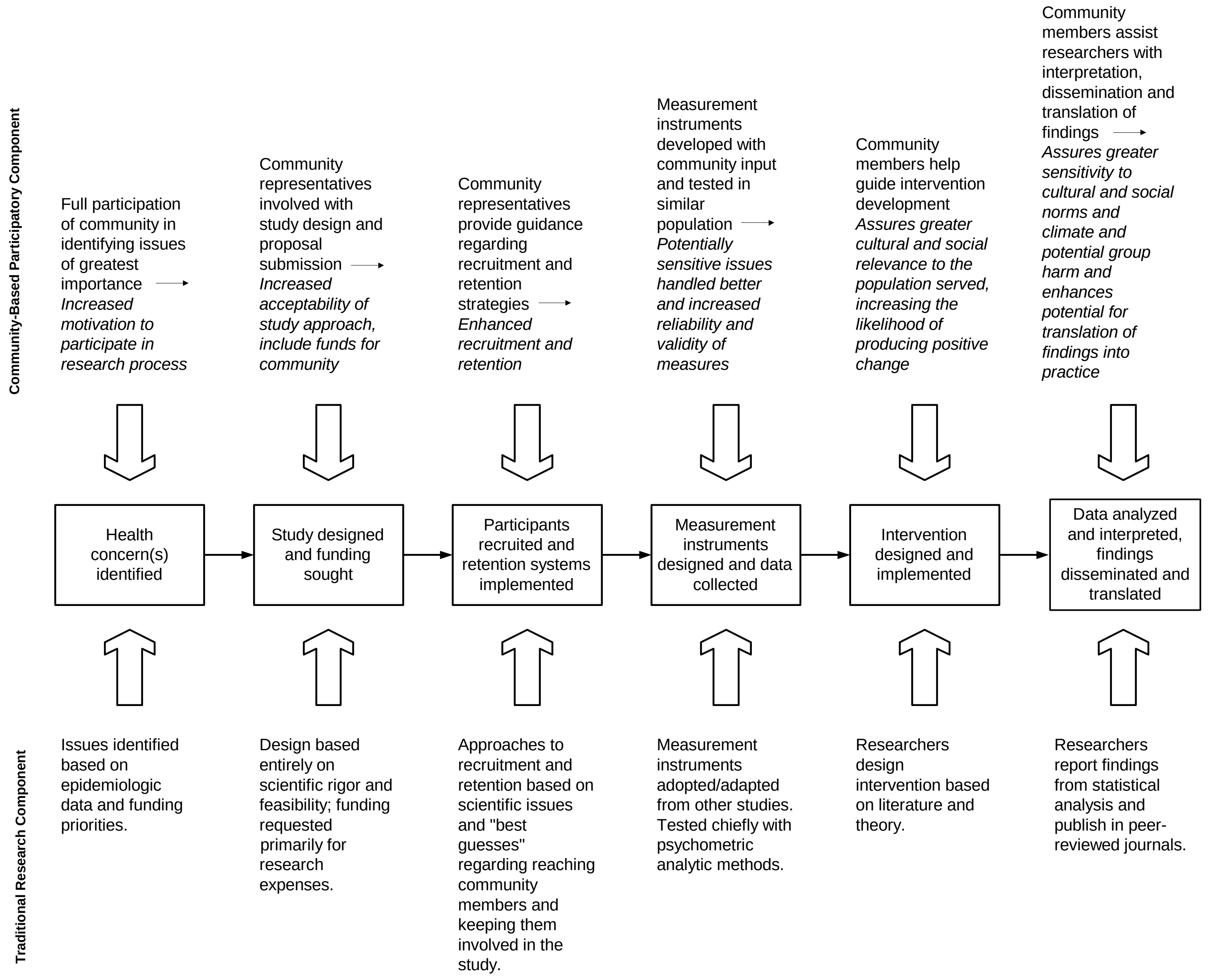

Table 1. Critical elements in community-based participatory research

CBPR Implementation and Potential Impact				
Research Element	**CBPR Application**	**Community Benefits**	**Research Benefits**	**Research Challenges**
Assembling a research team of collaborators with the potential for forming a research partnership	Identifying collaborators who are decisionmakers that can move the research project forward	Resources can be used more efficiently	Increases the probability of completing the research project as intended	Time to identify the right collaborators and convincing them that they play an important role in the research project
A structure for collaboration to guide decisionmaking	Consensus on ethics and operating principles for the research partnership to follow, including protection of study participants	The beginning of building trust and the likelihood that procedures governing protection of study participants will be understood and acceptable	An opportunity to understand each collaborator's agenda, which may enhance recruitment and retention of study participants	An ongoing process throughout the life of research partnerships that requires skills in group facilitation, building consensus, and conflict accommodation
Defining the research question	Full participation of community in identifying issues of greatest importance; focus on community strengths as well as problems	Problems addressed are highly relevant to the study participants and other community members	Increased investment and commitment to the research process by participants	Time consuming; community may identify issues that differ from those identified by standard assessment procedures or for which funding is available
Grant proposal and funding	Community leaders/members involved as a part of the proposal writing process	Proposal is more likely to address issues of concern in a manner acceptable to community residents	Funding likelihood increases if community participation results in tangible indicators of support for recruitment and retention efforts, such as writing letters of support, serving on steering committee or as fiscal agents or co-investigators	Seeking input from the community may slow the process and complicate the proposal development effort when time constraints are often present
Research design	Researchers communicate the need for specific study design approaches and work with community to design more acceptable approaches, such as a delayed intervention for the control group	Participants feel as if they are contributing to the advancement of knowledge vs. as if they are passive research "subjects," and that a genuine benefit will be gained by their community	Community is less resentful of research process and more likely to participate	Design may be more expensive and/or take longer to implement Possible threats to scientific rigor

Table 1. Critical elements in community-based participatory research (continued)

CBPR Implementation and Potential Impact				
Research Element	**CBPR Application**	**Community Benefits**	**Research Benefits**	**Research Challenges**
Participant recruitment and retention	Community representatives guide researchers to the most effective way to reach the intended study participants and keep them involved in the study	Those who may benefit most from the research are identified and recruited in dignified manner rather than made to feel like research subjects	Facilitated participant recruitment and retention, which are among the major challenges in health research	Recruitment and retention approaches may be more complex, expensive, or time consuming
Formative data collection	Community members provide input to intervention design, barriers to recruitment and retention, etc. via focus groups, structured interviews, narratives, or other qualitative method	Interventions and research approach are likely to be more acceptable to participants and thus of greater benefit to them and the broader population	Service-based and community-based interventions are likely to be more effective than if they are designed without prior formative data collection	Findings may indicate needed changes to proposed study design, intervention, and timeline, which may delay progress
Measures, instrument design and data collection	Community representatives involved in extensive cognitive response and pilot testing of measurement instruments before beginning formal research	Measurement instruments less likely to be offensive or confusing to participants	Quality of data is likely to be superior in terms of reliability and validity	Time consuming; possible threats to scientific rigor
Intervention design and implementation	Community representatives involved with selecting the most appropriate intervention approach, given cultural and social factors and strengths of the community	Participants feel the intervention is designed for their needs and offers benefits while avoiding insult; provides resources for communities involved	Intervention design is more likely to be appropriate for the study population, thus increasing the likelihood of a positive study	Time consuming; hiring local staff; may be less efficient than using study staff hired for the project
Data analysis and interpretation	Community members involved regarding their interpretation of the findings within the local social and cultural context	Community members who hear the results of the study are more likely to feel that the conclusions are accurate and sensitive	Researchers are less likely to be criticized for limited insight or cultural insensitivity	Interpretations of data by non-scientists may differ from those of scientists, calling for thoughtful negotiation
Manuscript preparation and research translation	Community members are included as coauthors of the manuscripts, presentations, newspaper articles, etc., following previously agreed-upon guidelines	Pride in accomplishment, experience with scientific writing, and potential for career advancement; findings are more likely to reach the larger community and increase potential for implementing or sustaining recommendations	The manuscript is more likely to reflect an accurate picture of the community environment of the study	Time consuming; requires extra mutual learning and negotiation

Table 2. Key questions for the evidence report on community-based participatory research

1. What defines CBPR?
   - What are the essential elements of CBPR?
   - What are the "best practices" of CBPR, including the characteristics of successful investigator-community partnerships?
   - What are the major expected outcomes from both the research and community perspectives?

2. How has CBPR been implemented to date with regard to the quality of research methodology and community involvement?
   - What is the quality of research methodology?
     - Study design
     - Measurement
     - Data collection
     - Analysis
   - What is the level of community involvement in the research process?
     - Priority setting and hypothesis generation
     - Methods selection
     - Proposal development and funding
     - Study design and implementation, data collection tools, recruitment and retention, analysis and interpretation
     - Intervention design and implementation
     - Translation and dissemination of research findings
     - Integration and sustainability

3. What is the evidence that CBPR efforts have resulted in the intended outcomes?
   - Improved research quality outcomes
   - Community capacity outcomes
   - Health (broadly defined) outcomes

4. What criteria and processes should be used for review of CBPR in grant proposals?
   - What criteria should high-quality grant applications meet?
   - What guidance can be offered to funding organizations and applicants?
   - Who should be involved in the review process? What should be the role of the community?
   - What are current approaches by funders to soliciting and reviewing CBPR grant proposals?

Table 3. Key databases and search terms

Databases	Search Terms	Limits
MEDLINE	Community-based participatory research or CBPR or participatory research or action research or participatory action research or participatory evaluation or community driven research or action science or collaborative inquiry or empowerment evaluation; expert names (TEAG members and expert meeting attendees)	English language
Cochrane	Community-based participatory research; community + action + research; empowerment evaluation; collaborative inquiry	None
Sociofile	Community-based participatory research or CBPR or ((action research) and (community or empowerment or participation) and (health or medical or medicine))	None
PsycInfo	Community-based participatory research or CBPR or ((community based participatory) or (community driven or collaborative inquiry)) and (research)	None

Chapter 3. Results

This chapter presents the results of systematic review of the literature on community-based participatory research (CBPR) conducted by the RTI International–University of North Carolina Evidence-based Practice Center (RTI-UNC EPC) on behalf of the Agency for Healthcare Research and Quality (AHRQ). It presents findings for the four key questions (KQ) introduced in Chapter 2 (Table 2). Briefly, KQ 1 concerns the definitions of the entire field and our quest to develop a synthetic definition that would then provide an appropriate backdrop for the remaining analyses. KQs 2 and 3 focuses on: (a) how CBPR has been implemented to date, focusing in particular on the quality of research methodology and the level of community involvement in the research process; and (b) what evidence exists that CBPR efforts have resulted in the intended outcomes. KQ 4 dealt with developing criteria for CBPR funding.

We report our results in two main sections of this chapter. First, we describe our analytic strategy; then, we present our results by the four key questions. Tables for this text appear at the end of this chapter. Detailed evidence tables appear in Appendix C.

Analysis Strategy

In developing an approach for synthesizing the literature about CBPR, our review of the literature and conversations with the expert meeting attendees and our Technical Expert Advisory Group (TEAG), as described in Chapter 2, made apparent that each key question would require a different analysis strategy. These are described briefly below.

KQ 1: Definition of Community-based Participatory Research

In exploring this topic, we sought to answer three important questions:

- *What are the essential elements of CBPR?*
- *What are the "best practices" of CBPR, including the characteristics of successful investigator-community partnerships?*
- *What are the major expected outcomes from both the research and community perspectives?*

We identified 58 peer-reviewed articles that were conceptual in orientation; that is, they synthesized the evolution of, values for, or lessons learned from collaborative research. All articles used CBPR or similar terms, such as action research, collaborative community action research, community-centered praxis, participatory action research, participatory evaluation, and participatory research. Of these 58, we were able to retrieve and review 55 articles; three were not retrievable through interlibrary loan requests or Web site searches by the time we prepared this report. Our review of the abstracts of these three articles suggests that their acquisition would not materially change our results. The articles came from the fields of anthropology, community development, community psychology, disability research, environmental health, health education, health sociology, injury research, mental health, nursing, organization development, patient care, and reproductive health.

We used three reviewers to abstract content from these 55 articles, using a matrix of 28 cells, representing specific CBPR domains in which to enter abstracted verbatim text. The matrix appears in Appendix B. The 28 domains were named as essential elements of participation; essential elements of research; best practices; and expected outcomes for seven components of research (identification of issues and concerns; study design and funding; participant recruitment and retention; measures and data collection; intervention design and implementation; data analysis, interpretation, and dissemination; and partnership structure). One of the Scientific Co-Directors (EE) reread the 55 articles to verify the verbatim text entered onto each cell of the matrix, read through the text entered for each domain, and then summarized the meaning of abstracted text as themes.

KQs 2 and 3: Intervention Studies and Outcomes

As expected, we found a striking degree of variability in the study designs, substantive concerns, and scope of community involvement of CBPR studies. The extent to which these elements were reported in the published literature varied appreciably as well. We looked to the key questions to help us organize this assortment of studies and to decide whether the CBPR studies had achieved their intended outcomes. Specifically, we considered (a) whether the study had an explicitly intended outcome resulting from a planned intervention and (b) whether the outcome was evaluated in sufficient detail in the published literature available to us.

We defined an intervention as an organized and planned effort to change behavior among individuals, communities' norms or practices, organizational structure or policies, or environmental conditions. Our overriding principle was consistency; we used a definition of interventions that would have a similar meaning across different studies. As an example, although some studies using a participatory action research approach viewed participation in the study as the intervention or the means to achieve their goal of empowerment, we did not classify these studies as having an intervention. We did not restrict interventions to those involving the research community; we included evaluations of studies in which the intervention occurred before researchers became extensively involved in the process. In addressing the evaluation of the intervention, we considered whether the intervention was reported as completed and whether it had been evaluated in a manner that allowed us to make conclusions about whether the intended outcomes had been achieved.

Of the 60 studies relevant to KQs 2 and 3, 30 studies listed interventions and 30 were noninterventional studies (see Table 4 for a list of study names, abbreviations and citations, Table 5 for a summary of characteristics). Evidence Table 1 (Appendix C) comprises 12 of the 30 interventional studies that reported the intervention as complete and evaluated it in a manner that allowed us to assess whether intended outcomes had been achieved. In judging an intervention to be complete (as opposed to ongoing), we considered only whether the intervention had been evaluated; we did not consider whether the intervention was implemented to a lesser degree or in a manner that was different than the intention. Evidence Table 2

(Appendix C) consists of the remaining 18 interventional studies that reported an ongoing intervention (for which we could not find any later citations through our additional searches) and studies with completed interventions that were not fully evaluated (Table 6 presents summary results).

We did not attempt to create an evidence table for the 30 studies that had no interventions. CBPR studies may often focus on basic research questions, initially, without an intervention but with a commitment to disseminating and translating results into interventions and policy. While there is much to be learned about the CBPR approach from these studies, the 30 studies without interventions varied in the extent to which information was abstractable; we present summary information in Table 7.

KQ 4: Funding Criteria for Community-based Participatory Research

Based on our discussions with the TEAG and AHRQ, we understood our task for KQ 4 to be primarily one of synthesizing our findings from the evidence review for the purpose of guiding future funding applicants (proposal writers), reviewers, and agencies toward submitting and funding the best possible CBPR. To this end, we used the findings for KQs 2 and 3 to identify the strengths and weaknesses of currently funded CBPR and highlight some of the challenges that CBPR researchers face. As noted earlier, we also reviewed articles identified from the literature that addressed existing funding mechanisms specifically focusing on CBPR.

Some articles described broader challenges faced by CBPR researchers and the benefits that may accrue from such research to both communities and investigators.[2,11,53] Other articles addressed future research and funding priorities that included CBPR, such as those for the National Institute on Disability and Rehabilitation Research (NIDRR),[63] or the challenges of securing funding to sustain CBPR efforts.[64]

We also reviewed Web sites and talked with individuals in Federal agencies about issues of generating requests for applications (RFAs) for grants and of reviewing and funding CBPR proposals. We focused the Web search and discussions primarily on agencies and their study (review) sections associated with translational research, which we thought to be the most likely recipients of CBPR submissions. These include translational grants sections of the National Institute for Diabetes, Digestive, and Kidney Diseases (NIDDK), National Institute of Environmental Health Sciences (NIEHS) and the Demonstration and Education section (R18) for the National Heart, Lung and Blood Institute. With the Centers for Disease Control and Prevention (CDC) we reviewed and discussed the recently funded RFA “Community-based Participatory Prevention Research,” in 2002 and 2003, 26 grants were funded under this mechanism so the number of CBPR manuscripts submitted and published should rise markedly by the end of this decade.

Finally, we learned more about the Interagency Working Group for Community-based Participatory Research initiated by NIEHS and established in February 2002.[60] This group was set up Dr. Olden, Director of NIEHS, inviting other agencies to join in the formation of the Interagency Working Group. The purpose of this group is “to strengthen communication among Federal agencies with an interest in supporting CBPR processes in the conduct of biomedical research, education, health care delivery, or policy.” As this group is still in a formative stage, its members expressed considerable interest in the results of this evidence review as a guide to their future efforts.

Key Question 1: Definition of Community-based Participatory Research

Overview

Through our synthesis of verbatim abstractions from 55 articles entered onto the matrix of CBPR domains, we derived a summative definition of CBPR. This deliberately short, workable definition guided our work; we believe that it can serve the purposes of AHRQ, sponsor of this evidence report, other Federal agencies that extensively support CBPR, and other interested parties and agencies.

CBPR is a collaborative research approach that is designed to ensure and establish structures for participation by communities affected by the issue being studied, representatives of organizations, and researchers in all aspects of the research process to improve health and well-being through taking action, including social change. To expand this definition, we conclude that CBPR emphasizes (1) co-learning about issues of concern and, within those, the issues that can be studied with CBPR methods and reciprocal transfer of expertise; (2) sharing of decisionmaking power; and (3) mutual ownership of the products and processes of research. The end result is incorporating the knowledge gained with taking action or effecting social change to improve the health and well-being of community members.

The following sections present the results from our systematic review of the literature in this area, which formed the basis for the definition. We emphasize the essential elements of community participation, the essential elements of research, and best practices for these types of investigations. Other key issues concern the outcomes expected from the perspectives of both the community and the investigators.

Essential Elements of Community Participation

According to all 55 articles we reviewed for this key question, participation in the products and process of research by people who experience the issue being studied is considered fundamental to CBPR. Their participation has been justified on the basis of enhanced knowledge production and as a human right. Community members have a right to participate in research because they

- are uniquely qualified and capable to investigate their lived experiences;[65-73]
- should have the opportunity, as co-learners, to generate relevant knowledge and create critical awareness of collective self-reliance that are of immediate and direct benefit;[11,66,74-81] and

- are entitled to own the means of knowledge production and to hold the status and roles of the researcher in relation to the participants.[20]

[53,78,82-88]

Moreover, participation by community members who experience the issue being studied can enhance the quality of the process and products of research by

- providing descriptions, rich in detail, of the local social context and real-world constraints (i.e., replicability), which will improve conceptual robustness and explanatory utility of a study’s findings;[78,89,90]
- Establishing congruence between the study and local reality (i.e., increasing face validity), particularly for defining the problem, adapting methodology to specific ecologies and contexts, and determining the nature of acceptable solutions;[75,78,87,89,90] and
- Improving adequate response rates and minimizing attrition because the research question and data collection methods are likely to be context sensitive and culturally relevant (i.e., dependability).[78,88,91]

Community members’ participation in research is viewed as a *necessary condition* for the researcher and the researched to (a) redefine their relationship, (b) discover new understanding of the situation and their options, (c) make choices, (d) reduce frustration with past failed attempts, and thereby, (e) build their collective capacities to improve health and well-being of community members.[11,66,72,75-79,85] As a necessary condition, participation in CBPR has been characterized as a concept with multiple dimensions, a process with several modes, and a core value of democracy.

Democratic systems of decisionmaking give a central place to participation in open discussion by guaranteeing public reasoning and deliberative interactions.[67,74] The values placed on participation are tolerance of different points of view, including agreeing to disagree, and the importance of learning from one another.[83] Knowledge development, therefore, is not value-free but rather is political in nature.[67,68,70,71,74,83,86,87,92] That is, power accrues to those who are able to create knowledge and access systems of knowledge that name the problem, organize people and resources around the problem, and mobilize solutions.[67,83,87] Hence, decentralization of power in research decisionmaking is necessary to ensure participation of people who have a stake in the process and products of research, regardless of their status or prior experience with conducting research.

Participation in research of community members affected by the issue being studied has also been defined as a planned and directed process, which can be a social process or a means for empowerment. As a social process, participation is based on theories of group formation and functioning to facilitate open dialogue on divergent views, accommodate conflict, and agree on structures for collaborative decisionmaking.[11,70,83,84,93,94] As a means for empowerment, the purpose of participation is to engage the research group in actively examining the reasons for and consequences from either formal or informal activities of investigation through discussion, whereby needs are identified, decisions are made, and mechanisms are established to improve community life, services, and/or resources.[84,95]

This group process has been described as gradually moving the group through different modes of participation.[73,79] Although not reflective of all CBPR approaches, the four modes of participation, originally conceptualized by Biggs,[96] are as follows:

- *Contractual*: Researchers contract for services (e.g., interviewing) or resources (e.g., time or property) from local people who agree to take part in the research, inquiry, or experiment.
- *Consultative*: Local people are asked for their opinions and advice before the intervention is designed.
- *Collaborative*: Researchers and local people work together on a study that is designed, initiated, and managed by researchers.
- *Collegiate*: Researchers and local people work together as colleagues, each with different skills to offer for mutual learning, to develop a system for independent research among local people.

This notion of gradually shifting control from researchers to local people is also reflected in the literature on participation in research as a process of empowerment. Townsend and colleagues[86] defined empowerment, in a participatory research context, as a process of learning to critique and transform individual feelings, thoughts, and actions, as well as those of the organizations of society, so that the power and resources of research can be shared equitably. Drawing from theories of adult learning (e.g., Freire)[97] and action theory (e.g., Habermas),[98] empowerment is understood as changing not only a participant's personal experience with the power of research but also the power exerted through policies and other forms of institutional control over research.[68,73,78,80,81,83,85-87,92,99]

Nonetheless, local people's participation in research does not guarantee that power and resources will be shifted to them because research partnerships cannot be entirely horizontal.[84] That is, complete equity is constrained by community norms, institutional inertia, and internalized expectations that allow the more powerful participants, however well intentioned, to determine what level of participation at which stage of research is most valuable for whom.[84,99] When participants are conscious of how power is organized by the policies and institutions that govern research, the researchers and the researched are more likely to redefine the power relationship between them.[11,20,70,75,76,78,83,84,93] Whereas, failure to reflect on and openly discuss how power dynamics vary at each stage of research can inhibit meaningful participation and result in a sense of powerlessness and cynicism, when the many tasks involved with research become burdensome or unfeasible, and when the results do not meet expectations.[73,84]

Suggestions to researchers for potential collaborators include

- professional staff at a workplace (such as medical practitioners, health and human service workers, and therapists);[65-68,75,80,84,86,100]
- representatives of local organizations or agencies (such as managers, supervisors, nonprofessional workers, and clients);[11,74,81,86,94,100-103] and
- members of a local community (such as citizens, residents of a neighborhood or hamlet, and members of community-based organizations).[11,56,69,73,74,79,81,87,88,99-101,104]

Participants from one or all of these three categories can serve as researchers and research collaborators. The rationale is that research needs such collaborators for two additional reasons: (1) to gain entry into the world of the people who experience the issue being studied, and (2) to instill accountability and responsibility for what researchers learn to see.[66,67,87] Researchers can maximize reciprocity for the construction and validation of instruments, findings, and conclusions by examining the multiple world views on the issue that collaborators provide.[87]

Participatory research that is community based, such as CBPR, emphasizes enlarging the role and representation of communities as collaborators.[11,56,59,76,83,101] Community, as a collaborator, has been defined as a unit of identity, which is a social and cultural entity that can actively engage and influence its members in all aspects of the research process. Within any local area, people associate through multiple and overlapping networks with diverse linkages based on different interests.[11,20,59,90] This emphasis on community comes from the view that, for lay (nontechnical) people, their community holds the strongest potential for collective power to negotiate the production and use of knowledge with the institutions and systems that govern the research enterprise.[11,56,59,76,83,90,100]

Hence, for our evidence report on CBPR, we reviewed studies that included among their collaborators any of the following types of groups: community-based organizations and their executive directors, community as a unit of identity, community residents, clients served by an organization, or nonprofessional workers at a worksite. Many of these studies also included professional and management staff of professional organizations as collaborators. Therefore, we excluded from our review studies that collaborated solely with professional and management staff of professional organizations.

Essential Elements and Best Practices for CBPR Research

The field of public health generally agrees that CBPR is a collaborative process and approach to research for learning about health and illness while contributing to the good health of a community with whom the research is being conducted.[11,56,67-70,72,77,78,81,86,90,92,94,99] However, disagreement arises about whether the stages of research and methods of inquiry of a collaborative approach are the same as those of conventional research[69,83] or distinctively different.[84,87,92]

Nonetheless, consensus does exist on the distinguishing characteristics of a collaborative approach to research. The two core ideas are (1) the reciprocal co-learner relationship between the researcher and the researched[20,67-70,76,78,85,87] and (2) the immediate and direct benefit of using new knowledge for taking collective action and effecting social change.[11,65,66,71,74,81-83,89,90,93,94]

Establishing a reciprocal co-learner relationship is viewed as a systematically planned encounter between researchers and their community collaborators during each stage of research. In this, they (a) meet face-to-face to define their relationship, (b) enter into dialogue on the requirements for equalization of power in the processes and products of research, and (c) set, alongside each other, their respective legitimate knowledge and expertise for examining and addressing a particular issue.[68,76] The criteria for determining the quality of a reciprocal co-learner relationship, put forth by Badger,[75] are

- *Reflexive validity*: Recognizing and exploiting how researchers and a community's respective experiences, values, and actions have affected the research situation and interpretation of findings.
- *Dialectical validity*: Constant analysis and report of movement between theory, research, and practice by examining tensions, contradictions, and complexities of the research situation.
- *Critical validity*: Analyzing the process of change, intentions, actions, ethical implications, and consequences.
- *Face validity*: Subjective judgment of researchers and community that findings appear to fit reality.

Moreover, the three potential uses of research that may be of immediate and direct benefit to a community collaborator have been defined as conceptual, instrumental, and persuasive.[84] Conceptual uses of research aim to change the way people think about problems and their solutions. The experience of collaborating in research can help communities better understand change-related processes, such as the politics of information utilization in change efforts, or the social context in which definitions of the problem are created and revised.[70,71,73,83,87,89] Instrumental uses occur when the results dictate direct changes in existing programs or services.[11,59,69,72,78,81,83,89,90,92,94,99,105] Persuasive uses of research gather sufficient evidence to support a particular position or to influence policy.[53,74,80,82,83,85-89,93,99]

Therefore, the essential research elements of a collaborative approach have been categorized below under its two distinctive characteristics: (1) the reciprocal co-learner relationship between researchers and communities, and (2) the immediate and direct use of new knowledge for taking collective action and effecting social change. With regard to "best practices" for each research element, which are derived through empirical testing, we report on *recommended guidelines* for operationalizing each element from our review of 55 articles that are conceptual rather than empirical.

Reciprocal Co-Learner Relationship. The first important element in this category holds that a structure or mechanism is created for shared decisionmaking between researchers and community. Examples from the literature include a community advisory board, technical advisor group, task force, planning committee, evaluation committee, coordinating committee, or steering committee.[56,57,70,78,80,81,84,89,102,106] Such decisionmaking bodies must develop and then operate under guiding principles for collaboration.[56,57,78,106] The rationale is that in any collaborative relationship, conflict and contradictions are not only inevitable, but in fact are necessary for moving forward with trust building, power dynamics, and accommodating conflict at every stage of the research.[83,93]

Another important element is that the study be designed to remove previous barriers to community participation in research. Some public health scholars and practitioners assert that minimal direct benefit accrues to communities that have given their time, resources, and good will to a study that has "pathologized" them.[68,73,87] That is, when research pathologizes social problems, the common outcomes are individually focused solutions (as opposed to community-focused) controlled by noncommunity entities, thereby once again disenfranchising communities.[73,87]

To remove barriers to community participation in research, the following guidelines have been recommended:

- Offer educational experiences, such as "vision workshops," for both researchers and communities to understand resources and strengths of local people; generate awareness of shared concern with the problems inhibiting social progress of a community; transfer new skills during the research process; and discuss the details of research methods and tensions of matching experimental designs with community action.[70,74,76,93,107]
- Hold group meetings and structured interviews to ascertain concerns about research and discuss methodological options, given a community's resources.[82]
- Hire local coordinators.[107]
- Make written plans detailing types of expertise required at each stage of research.[102]
- Create issue-specific operational mechanisms, such as ad hoc groups, for internal review of operations and measures of accountability.[70,102,106]
- Appoint researchers as guardians of the data *during* the study, and assure guardianship to the community at the end of the study. However, the shared decisionmaking body is obligated to offer original researchers the opportunity to continue analysis before it offers data to new investigators, and the latter must agree to follow guiding principles of collaboration established by the research partners.[78]
- Evaluate the collaborative processes involved throughout the cycle of problem analysis, intervention design, implementation, and institutionalization.[90]

Immediate and Direct Use of New Knowledge. Several considerations arise in thinking about how new knowledge from CBPR work should be applied. First, socioeconomic determinants of health are assessed, addressed, or both. The purpose of assessing and addressing such determinants is to engage researchers and communities in examining how people's personal experiences with health disparities are linked to policies, social structures, and other forms of institutional control.[86] To assess socioeconomic determinants of health, experts have suggested two research strategies as best practices. One is for the study to take an ecological perspective on health so that it generates a holistic understanding of the power that systems exert on everyday life.[11,79] Another strategy is to conduct a power analysis that examines where there is systematic disadvantage, failure to advocate, or merit that is not being recognized or acknowledged.[83] The new knowledge can then be incorporated into the study's problem definition and development of a conceptual framework. The eventual design of a multilevel intervention would address, for example, training families to monitor and protect their homes from air pollutants. The intervention might also include organizing affected communities to present their findings to legislative bodies and advocate for changing policy that is biased toward locating polluting industry near rural communities that are often poor and home to people of color.[88]

Second, the research team should be cognizant and respectful of community needs and priorities during the study's implementation. A high degree of cooperation and flexibility between researchers and communities can be achieved through the best practice of building regular "feedback loops" into the stages of research, one step at a time, and directly reflecting evidence from the previous step.[66,84,94] To be flexible to community needs and priorities, movement through the stages of research is cyclical, repetitive, and iterative.[11,66,94]

Feedback loops create forums for meaningful discussion between researchers and communities on significant community issues, which can also help overcome distrust.[56,75] A reflexive discussion is one in which researchers and their community collaborators acknowledge that their respective experiences, actions, and values have affected the situation and its interpretation.[75] For example, a community may see different uses for the data than what was originally planned. This issue could be addressed at the next scheduled feedback session with a committee specifically formed for this purpose to enhance the research team's flexibility in addressing unforeseen needs and priorities.[84] Moreover, the research team's flexibility will enable them to adjust to the pace at which a collaborative research approach can proceed with success.[74]

Third, the study's duration and purpose contribute to capacity building among individual researchers and their institutions as well as among individual participants or their larger community. Researchers taking a collaborative research approach have an obligation to maintain a long-term relationship of trust in their dual role of researcher-educator, with the purpose of capacity building.[11,78] Four stages of building collective capacity have been recognized: (1) identifying common ground; (2) establishing self as a community player with an issue-based agenda; (3) working on a common project; and (4) working on a multiagency, multisector project.[92] Through a collaborative research approach, capacities that can result include those related to formation of critical consciousness of their unrealized capabilities and potential, improvement of the lives of those involved in the study, and reformation of underlying political structures.[82]

Fourth, formation of critical consciousness of their situation to find answers to unrealized capabilities and potential is another important element of use of new knowledge. Participants' sense of isolation or alienation is reduced by being engaged in systematic discussion and reflection during the study. By focusing on their community, the residents' awareness of their shared strengths and concerns is increased.[82,93]

Fifth, improvement of lives of those involved in the study means that residents' unique knowledge of what will work in their community is integrated into information sharing and problem solving during the study. Increasing participants' power to claim a larger share of decisionmaking for their community makes it more likely that findings can be applied to address the health and social issues raised as a result of the research. Community participants can increase control over their lives by nurturing community strengths and problem-solving abilities.[11,69,78,82,93,100]

Sixth, reforming underlying political structures is another key action. The ultimate goal of a collaborative research approach is to change social structures, dealing with institutional control and conflict.[66] The acts of creating knowledge and using it to communicate a community's perspective to policymakers are fundamentally about the right to speak.[82] Although these steps may not guarantee shifting power to communities to decide on policy, a community's capacity to interact directly with policymakers is a necessary first step toward understanding and changing oppressive situations.[73,82,88]

Finally, findings should be (1) used to address the original health concern, (2) disseminated and interpreted to participants, (3) applied to a health-related intervention or policy change, and (4) used to sustain research-related interventions by the community. When new knowledge is constructed from multiple perspectives and meanings, differences in interpretation of findings are inevitable and intellectual growth can occur.[84] Hence, community collaborators must remain fully involved with decisions on what, where, when, to whom, and how to disseminate findings, apply them toward an action, and sustain them.[82] Products for dissemination include advocacy documents for relevant agencies and authorities, mass media reports, training manuals, and scientific papers and manuscripts.[84] To ensure full collaboration in co-authoring communications about findings, experts recommend developing dissemination guidelines.[78] Before submitting manuscripts or presenting at conferences, co-authors discuss findings with the study's shared decisionmaking body. Any collaborator who disagrees with the interpretation or method of dissemination is invited to submit an alternative interpretation as an addition to the main communication, albeit written or oral, to be submitted at the same time. No single collaborator has the power of veto.

Macleod offers the following recommendations for disseminating findings:[84]

- Frame results to limit potential for blaming people for their problems.
- Communicate results openly, even when some stakeholders will not benefit.
- Establish and maintain credibility of persons who conducted the research.
- View feedback and dissemination as an on-going process of dialogue with stakeholders.
- Be aware of political considerations behind feedback from stakeholders.
- Stay as jargon-free as possible, even with well-trained audiences.
- Use oral presentations as a means for assessing the validity of findings.
- Develop a task force of community members to study any recommendations.

With regard to application of findings, we examined the three potential uses of research described earlier (i.e., conceptual, instrumental, and persuasive).[84] Conceptual application of the findings involves developing theory that is sensitive to a community's context and culturally relevant. Through understanding the social contexts in which findings are applied, the public health field can move toward developing better theories of the problem.[70,71,73,83,87,89] Instrumental application of the findings includes documenting the process by which the findings are used in designing interventions or effecting social changes that attempt to solve public health problems.[2,11,59,69,72,78,81,83,89,90,92,94,99] When the application of findings begins and ends with the behaviors of individuals, however, it is not considered social change (i.e., persuasive).[87] Persuasive application of findings alters the structure, policies, and other forms of institutional control over a community or individual's health and well-being.[53,74,80,82,83,85-89,93,99]

We detected disagreement on how a collaborative research approach contributes to the sustainability of research-related interventions. Some conclude that a long-term commitment by all collaborators is necessary.[11,56,69,74,78,90] For others, however, achieving community autonomy or self-reliance is necessary for sustaining interventions that emerged from the study.[79,80]

Expected Outcomes from the Community and Research Perspectives

A few scholars note that outcomes from a collaborative research approach include those of a capacity-building intervention.[78,82] Inclusiveness of community residents in learning to integrate questioning with reflection—which is the power of research—enables them to challenge and increase the power of conceptualizing the problem, selecting methodology, defining goals and objectives, securing funding, training trainers, sampling and recruiting participants, constructing measures, conducting analysis, interpreting results, disseminating findings, and advocating for policy change.[53,56,59,69,73,77,80,81,86,88,103,108] Hence, because the data are "grounded" in the experiences of people living along the margins of health and well-being, the findings are more likely to lead to collective action for structural and personal change.[71,86,94,109-111]

At the same time, this grounding in a community's local context can increase the face validity of findings on disparities in health status and practices. Arguably, problem definition, measures, and acceptable solutions need to be connected to social determinants of health; in other words, broad political and economic processes that have drawn capital, people, services, and other resources from low-income, rural, and inner-city communities.[75,78,87,89,90,112] Moreover, by enabling the decisionmaking power of a community to determine with researchers the most context-sensitive and culturally relevant methodology, CBPR approaches can raise the dependability of findings for identifying priorities and possible solutions. The reason is that eligibility criteria, recruitment strategy, data collection methods, and analysis procedures will reflect indigenous mechanisms and structures for communicating information and opinions and exerting influence.[78,88,91] Finally, including community collaborators can increase the replicability of findings on health improvements. Replication by others is more likely to follow from documenting the details of *how* behavioral and social change processes, which are conceptually robust and have explanatory utility, combine resources beyond a community with the competencies, influence, and other assets embedded in a community.[78,89,90,112]

Key Question 2: Implementation of Community-based Participatory Research

Key Question 2 asks how CBPR has been implemented with regard to the quality of research methodology and community involvement. In answering this question, we first provide an overview of the studies identified through this review. We then provide a summary of the implementation of CBPR methodology with respect to study design, measurement, and data collection and analysis. Finally, we provide a summary of different elements of community involvement reported by these studies.

Overview of CBPR Studies

To answer KQ 2, we drew from the 60 studies identified as CBPR. To be included, articles were required to use basic community participation methods and to include some element of data collection and analysis, be it quantitative or qualitative. This is not an exhaustive list of all CBPR studies ever published; we suspect several other studies may exist that we could not identify because of the limitations of MEDLINE indexing terms, the nature of this literature and the work it represents, and our systematic review methodology.

Many of the studies reviewed in this report comprise multiple citations; to allow for both readability and easy access to the complete list of citations, we provide the full study name, the abbreviated name by which we refer to the study in this review, and the complete list of citations in Table 4. When we cite the study for the first time in the text, we cite all references; thereafter, we use the abbreviated study name. Table 5 summarizes the numbers of these 60 studies with certain characteristics related to populations, clinical or social topics, and similar matters. These points are discussed in more detail in the following sections.

Number and Time Between Publications. We found an average of two publications per study: 35 studies published only one article, but the remaining 25 studies produced, on average, 3.5 articles. This suggests a skewed distribution, with some studies generating multiple publications over a period of several years. By design, some CBPR studies include both a focus on an intervention and an evaluation of the intervention. The complexity of CBPR collaborations combined with journal restrictions on the length of the article are likely to contribute to the multiplicity of articles in these instances.

Also, CBPR collaborations may take longer, in general terms, than some other types of research and, thus, more time to publish results. Not counting the East Baltimore Health Promotion Study, which spanned 17 years between the first publication and the last, the 24 studies with more than one publication took about 2.5 years from the first publication to the last. Because several of these studies were not completed as of late 2003, we believe that our findings likely understate both the average number of articles generated by a study and the average length of time taken to publish the results.

Period of Research and Publication. The number of CBPR studies has increased sharply in recent years, especially since 2000, and the trend is likely to continue. This phenomenon may be attributable to several critical incidents. With the launching in 1998 of the Federal Department of Health and Human Services' Initiative to Eliminate Racial and Ethnic Disparities in Health by the Year 2010, national attention has generated an environment for innovation in public health research and practice for achieving the Healthy People 2010 objectives. Public and private funding institutions have been sponsoring special funding mechanisms, which explicitly require proposed studies to take a CBPR approach. A Federal Interagency Committee has been formed to advance the use of CBPR; it involves the National Institutes of Health (NIH), CDC, AHRQ, Department of Agriculture, Housing and Urban Development, Federal Highway Administration, Agency for Toxic Substances and Disease Registry, National Science Foundation, and Environmental Protection Agency.[60] Most recently, the 2003 Institute of Medicine Report, *Who Will Keep the Public Healthy? Educating the Public Health Professionals for the 21st Century*, identifies the use of CBPR as one of eight areas of critical importance in which all public health professionals need to be trained.

Substantive Health Concerns. Several studies took a broad approach to defining health, and these studies constituted the largest group in this literature base. Among studies that took a narrower focus, environmental health was the leading concern because of NIEHS' long-standing interest in CBPR.

Communities of Interest. The definition of community typically included elements of both sociodemographic characteristics and location. Of these 60 studies, the highest proportion of studies (24 studies, or 40 percent) defined their community primarily along racial and ethnic lines, followed by health concerns (18, or 30 percent), location (12, or 20 percent) and occupation (5, or 8 percent).

Among the 24 studies that defined community primarily through race and ethnicity, eight focused on Native Americans, five each on African-Americans, Latino and Asian populations, and one on multiple ethnic groups. Of note, studies conducted with communities of color concentrated on those of low socioeconomic status, using a combination of indicators, such as level of education completed, median family income, health insurance coverage, enrollment in entitlement programs, or English language skills.

Funding. We were able to determine funding sources for 55 of the 60 studies. The majority (53 percent) of these studies reported a single funding source, but a significant minority (33 percent) mentioned at least two funding sources. Several studies were funded by a few key CBPR funding mechanisms. They include the Urban Research Centers, previously funded by the CDC and Environmental Justice and Community-based Participatory Research in Environmental Health of the NIEHS.

A total of 75 funding sources could be classified as Federal or national funding, state funding, foundation or private funding, or university funding. Government agencies at the national level were the predominant source of support; of these, NIEHS and CDC were the two most commonly named funders. Foundations or private sources of funding such as the Kellogg Foundation and the Robert Wood Johnson Foundation also played a significant (albeit smaller) role in supporting CBPR, followed by state agencies such as local departments of health and universities.

Implementation of CBPR: Research Methodology

We were best able to evaluate research methodology by distinguishing among three categories of studies. Of 60 studies, 30 were completed interventions or ongoing interventions; of these, 12 evaluated the intervention and 18 had either not completed the intervention or not evaluated it fully. The remaining 30 studies either did not have an intervention or did not report one. To assess fairly the actual study design, measurement, and data collection and analysis across studies, we considered it necessary to separate studies that implemented and evaluated planned interventions from those that were nonintervention. Noninterventional studies inevitably have different study aims and reporting standards than interventional studies. Similarly, we thought it necessary to distinguish those studies that had completed and fully reported the results of their interventions from those that had not. The following three subsections describe these separate bodies of literature. Tables 6, 7, and 8 present study design and data collection methods for the studies in the completed intervention, not completed or fully evaluated, and noninterventional groups, respectively.

Studies That Implemented and Evaluated Interventions. Table 6 lists the 12 studies that completed evaluated interventions. They are listed by study design and then alphabetically. Although these research teams used several study designs to evaluate interventions, experimental and quasi-experimental designs were used more frequently than nonexperimental methods. Table 6 provides citations, study design, intervention and key results. In addition, it gives two quality grades, one for research design and one for elements of community-based participation. Quality grades could range from 1 to 3, with higher scores reflecting better studies.

Of the 12 studies in this category, 4 were randomized controlled trials (RCTs); they include Communities Mobilizing for Change on Alcohol or CMCA,[113-118] East Baltimore Health Promotion;[119-122] Health is Gold,[123] and the Sierra Stanford Partnership.[124,125] Five of the 12 were quasi-experimental studies; these include HIV Testing and Counseling for Latina Women;[126-130] Internet Access and Empowerment;[131] the Korean Study Breast and Cervical Cancer Screening Intervention;[132,133,133,134] the Okanagan Diabetes Project,[135] and the Wai'anae Cancer Research Project.[136-138] Studies with nonexperimental designs include the New York Immunization Project[139] and the Stress and Wellness Project,[32,140-143] and Women Dedicated to Demolishing Denial: HIV Risk Reduction for Lesbians and Bisexual Women.[144,145] One of three nonexperimental studies was a one-group pretest and posttest study (NY Immunization); another was a nonexperimental design with data collection throughout the period of the intervention, (Women and HIV Denial); and the third was initiated with a nonexperimental design (Stress and Wellness), but because of changes in operations at the study site, it eventually became a natural experiment comparing two sites, with pretest and posttest data.

The predominant data collection method was quantitative. Five studies used a combination of qualitative and quantitative data collection methods (HIV Latina, Internet Access, Okanagan, Wai'anae, and Stress and Wellness); and one used only qualitative methods (Women and HIV Denial). Two studies mentioned blinded data collection (Sierra Stanford and Stress and Wellness).

Two studies reported that they changed their measures, based on input from community members, to be more culturally relevant (Wai'anae and Korean Study). Three other studies mentioned that they applied instruments that had been previously used in the literature (Internet Access, Stress and Wellness, and Sierra Stanford), but it is unclear whether these were previously validated instruments.

All the studies in this category reported multiple primary variables and outcomes. All but one (Internet Access) assessed socioeconomic determinants of health.

All studies using experimental, quasi-experimental, and one-group pretest and posttest designs reported the statistical significance of their findings. Of the five studies that used qualitative data either alone or in combination with quantitative methods (HIV Latina, Internet Access, Okanagan, Stress and Wellness, and Wai'anae), two (Stress and Wellness and Wai'anae) mentioned that community members checked results as a way of verifying the findings with participants. Four studies used a triangulation of data sources (such as medical records, surveys of multiple interest groups and media records) to validate their conclusions (CMCA, East Baltimore, Stress and Wellness, and Okanagan).

Interventions Either Not Completed or Not Fully Evaluated. In the absence of clear information on implemented study design, we classified these studies based on the intended study design. This group of studies (see Table 7) illustrates the long-term nature of much CBPR work and the fact that many studies require several publications issued over several years to report the full findings of the project. Of the 18 ongoing interventions, 4 were part of ongoing experimental designs (Community Action Against Asthma,[146-148] PRAISE!,[149,150] Seattle King County Healthy Homes Project[151] and Seattle King County Vaccines[152]); 1 was intended to be a quasi-experimental design (TEAL[153]); and 13 were nonexperimental designs (Elderly in Need,[92,154] East Side Village Health Worker Partnership,[106,112,155-163] Haida Gwaii Diabetes

Project,[77] Healthy Homes, Healthy Child,[100,164,165] Kahnawake,[78,166-169] La Vida,[170] Mom Empowerment, Too!,[171] the Nuclear Risk Management for Native Communities Project,[70] Preventing Agricultural, Chemical Exposure in North Carolina Farmworkers (PACE),[172,173] The Partners for Improved Nutrition and Health Project (PINAH),[174] Preventing Halloween Arson,[175] Survival Guide,[176,177] and Women and Heart Disease.[178] Table 7 provides a list of citations, study designs and the intended intervention for these studies. Two of the 13 studies with nonexperimental designs discussed plans for later RCTs to test the effectiveness of the interventions (Survival Guide and PACE).

These 18 investigations published findings from baseline data, formative work, and process data. Among this group of studies, information was generally not sufficient to determine whether they had implemented the intervention as intended, which is an issue of research fidelity. These data are more commonly reported when final outcomes data are presented, so this information gap may be expected to be addressed for some of these studies in the future.

Compared to the fully evaluated interventions, a similar portion of these studies used a combination of qualitative and quantitative methods (39 percent for incomplete interventions, compared to 42 percent for fully evaluated interventions). Many of these projects are ongoing studies and have not yet reported their final outcomes data. On average, the first publication from these studies appeared in the peer-reviewed literature 4.5 years ago, compared to 9 years ago for completed interventions.

Four studies reported that the community reviewed and revised their instruments and concepts (ESVHWP, PRAISE, Seattle Homes, and Survival Guide). Although several studies reported using previously developed instruments, the information was insufficient in most cases to determine whether the instruments had been previously validated. Eight studies reported their intent to use multiple sources of information, including archival records, surveys and focus groups of multiple interest groups, environmental assessments, and clinical data from blood sample and pulmonary function tests (CAAA, PRAISE, TEAL, ESVHWP, Healthy Home, Kahnawake, Preventing Arson, and Survival Guide).

Although no study presented sufficient data to qualify as fully evaluated interventions, 11 studies provided information on findings from analysis of psychosocial data, process evaluation, the research process, or more descriptive aspects of the intervention (CAAA, PRAISE, Seattle Vaccines, Elderly in Need, La Vida, Kahnawake, ME2, PINAH, Preventing Arson, Survival Guide, and Women and Heart Disease).

The Halloween Arson study represents an unusual case in that the intervention was conducted (in response to ongoing violence in Detroit around the Halloween period) by a coalition of community members and organizations without any input from researchers or an evaluation plan. Later, researchers in the Urban Research Center at the University of Michigan retrospectively evaluated the intervention in collaboration with community members. In many research efforts using traditional non-CBPR methods, the community is not likely to be involved in designing the intervention. In this case, however, the researchers were not involved in intervention design but were later called in to use a retrospective research method and analysis strategy.

Noninterventional Studies. Table 8 provides key information on the 30 studies we reviewed that had no clear intervention either implemented or planned. The table provides citations, study design, and objective for these studies. Of these 30 noninterventional studies, 27 were nonexperimental and primarily exploratory in nature. The other three were observational studies that were designed to permit extrapolation to individuals beyond the study population (African Americans Building a Legacy of Health,[179] Hospice Access and Use by African-Americans,[180] and Oregon Migrant Farm Workers[181,182]). Although these studies are classified as noninterventional for the purposes of this review, these studies may have resulted in the implementation of an intervention as a result of the findings. Several of the studies in this category resulted in significant policy change in either civic or private institutions. For the purposes of this report, these studies are considered to be noninterventional because they were not designed with an explicit intervention, nor did they undertake the evaluation of any intervention that might have resulted from their findings. Because the 30 studies without interventions were varied in the extent to which information was abstractable, we do not present detailed evidence tables; summary information is provided in Table 8.

The purpose of these studies varied and several had multiple objectives. We classified studies according to what appeared to be their primary objective in the literature available to us. More than half the studies (16 of 30) were predominantly concerned with understanding the problem at hand. Of these 16 studies, 2 focused on identifying health problems (Poultry Slaughterhouse Study[183] and[184] HERE[185]); 8 were explorations of health-related knowledge, attitudes and practices (James Bay Cree Diabetes,[76] TAS Together for Agricultural Safety Project,[186] Perspectives of Pregnant and Postpartum Latino Women on Diabetes, Physical Activity, and Health,[187] The Native Hawaiian Smokers Survey,[188] Controlling Pesticide Exposure to Children of Farmworkers,[189] Hospice Access and Use by African-Americans,[180] Diabetes in East Harlem,[190] and Disability community[191]); and 6 were intended to serve as a needs assessment involving community members in identifying health issues, concerns, and determinants that might ultimately be used to develop an intervention study or to inform community action (Aboriginal grandmothers,[192,193] Positively Fit,[194] Bingham,[195] Housing Options,[196] Madison County,[197] Participatory Action Research for Community Health Promotion[198]).

Ten studies moved beyond problem identification. Of these, six assessed factors influencing risk (Oregon Migrant Farm Workers;[181] Chinese American Elderly with Osteoporosis;[199] Community Health and Environment Program;[200-202] Ethnocultural Communities Facing AIDS;[203-208] The Harlem Birth Right Project,[209] Welcome Home Ministries[210,211]), two examined prevalence (The Glades Health Survey,[212] West Harlem Environmental Action [WE ACT][213,214]), and two examined the impact of environmental or policy change (EJS;[215,216] Evaluation of the Blended Funding Project[217]). Although most CBPR studies are designed to increase community capacity or engender empowerment as a byproduct of the collaboration, four projects described this as the major objective of the study (African Americans Building a Legacy of Health,[179] Healthy Neighborhoods,[69,218] Participatory Action Research for Hmong Women,[219] South Asian women[220]).

Of the 29 studies in this category that provided information on data collection methods, the majority (62 percent) used qualitative methods either alone, or in combination with quantitative methods. In 12 projects, this was the sole data collection approach (Oregon Migrants, Aboriginal, Bingham, Controlling pesticides, Disability community, James Bay, Madison County, Perspectives of Latinas, Positively Fit, South Asian, Welcome Home, and Housing

Options). In another six studies, the investigators combined qualitative and quantitative methods (CHEP, ECFA, HERE, Hospice Access, TAS, and Harlem Birth Right). Eleven studies (38 percent) reported using only quantitative methods (AABLH, Chinese Elderly, Diabetes in East Harlem, EJS, EBFP, Healthy Neighborhoods, PAR CHP, Poultry Slaughterhouse, Glades, Native Hawaiian, and WE ACT).

Over half of the studies (17 of 30) documented the involvement of the community in making measurement instruments more culturally relevant or mentioned field testing their instruments to improve their reliability (Oregon Migrants, Aboriginal, Chinese Elderly, Diabetes in East Harlem, Disability Community, ECFA, EJS, Healthy Neighborhoods, Housing Options, Hospice Access, James Bay Madison County, Native Hawaiian, PAR CHP, Poultry Slaughterhouse, TAS, and Harlem Birth Right).

Half the studies (15 of 30) presented baseline data, general findings or process evaluation results (Aboriginal, Bingham, CHEP, ECFA, Healthy Neighborhoods, HERE, Hospice Access, Housing Options, La Vida, PAR CHP, Perspectives of Latinas, Poultry Slaughterhouse, South Asian, Harlem Birth Right, and Welcome Home). The rest were primarily descriptions of either the research process or building the community-research collaboration.

Over a third of the studies (11 of 30) reported the use of multiple sources of evidence to validate their findings (Aboriginal, Bingham, CHEP, Controlling pesticides, ECFA, HERE, Hospice Access, Housing Options, Harlem Birth Right, TAS, and WE ACT).

Finally, many of these studies provided rich qualitative and quantitative data regarding the lengthy process of partnership development between universities and communities. Additionally, the studies described how the collaborative process benefited study design, data collection, and participant recruitment or retention, even if they did not include a formal evaluation of this process.

Level of Community Involvement in the Research Process

We reviewed all 60 studies to record evidence of the level of community involvement in the research process (Table 9). As with other sections of this review, our findings are limited by the information available in the published literature. Therefore, our report of the extent of community involvement is necessarily based on the perspectives of the authors of the published articles, which may not always have included the community partners.

The subsections below discuss specific elements of community involvement. The following analyses will typically begin by presenting the number of studies reporting any community involvement for each of these elements, with a comprehensive list of citations. However, in further analysis that lists the specifics of each element of community involvement, we provide illustrative rather than comprehensive citations. We have employed this approach because we found that in several instances, authors stated the nature of community involvement without providing additional detail. In other instances, we may have detected sufficient ambiguity about the extent of community collaboration to limit our abstraction of the data. Limitations of resources and time prevented us from seeking clarification from the authors in these instances.

Priority Setting and Hypothesis Generation. Twenty-eight studies involved the community in setting priorities and generating hypotheses. Often, community-based organizations were already concerned with an issue before researchers approached the community (e.g., Kahnawake). Sometimes residents needed to be recruited to form a Community Advisory Committee. The extent of community involvement varied greatly. Some studies changed or expanded priorities based on community input (James Bay, Survival Guide, CHEP, East Baltimore, HERE, La Vida, PAR CHP, and PAR Hmong); others mainly used community involvement to confirm priorities (Disability Community, NRMNC, Diabetes in East Harlem, and Health is Gold). One article reported a community organization that took the lead role, approaching the researchers about its community's priorities and desired research (WE ACT).

Of the 12 projects that assessed the effectiveness of an intervention, 8 reported community involvement (Sierra Stanford, Wai'anae, Health is Gold, HIV Latina, East Baltimore, Women and HIV Denial, Stress and Wellness, and Korean Study). Despite *a priori* notions that RCTs are less flexible than other study designs and that they tend to be dominated by researchers' concerns, we found that three of the four RCTs that evaluated interventions involved the community in setting priorities (Sierra Stanford, Health is Gold, and East Baltimore). In the case of the East Baltimore, the interests of community leaders were taken into account following a needs assessment to select hypertension and smoking as specific health issues.

Methods Selection. In all, 50 studies reported involving the community in selecting methods, but such participation occurred on different levels. Most studies reported using an advisory committee that cooperated with the researchers. Some committees reviewed proposed methods and suggested changes in wording or terminology to increase cultural appropriateness (Aboriginal, Madison County, ECFA, EJS, James Bay, and Housing Options).

Several communities were actively involved in designing surveys to emphasize particular issues of interest for the community. In one instance, the Haida Gwaii diabetes project, community involvement resulted in the exclusion of alcoholism, a major topic, because of controversy about the issue within the community.

Another frequently used method of involvement was to pretest surveys in the community. Evaluation of these pretest results led to changes in survey questions and improved clarity and validity (Chinese Elderly, TAS, Oregon Migrants, and ESVHWP). Some studies reported using qualitative results of focus groups or interviews to design an appropriate survey instrument (HERE and Hospice Access).

One group stated that it increased its sample size to address community concerns (Harlem Birth Right). Only one article described a complete change in data collection methods pursuant to community input. Residents of Madison County, for the Madison County study, stated a strong aversion toward surveys because of earlier experiences. Subsequently, the project adopted group interviews as a more acceptable method of data collection.

Proposal Development and Funding. Researchers usually took the lead role in proposal development, using their greater experience in the task of obtaining financial support, and they often applied for grants before the actual community involvement started. Fourteen studies mentioned community involvement in proposal development. Community involvement took place mainly in the form of advisory committees, but there were also examples of partnership steering committees in which community partners were involved as equal partners. In one instance (WE ACT), the community approached the researchers and initiated the proposal.

Nineteen studies reported shared funding. Communities mainly used funds to pay for staffing. In one study (Stress and Wellness), the community contributed some of the direct funding (taken from union funds) to maintain the research.

Study Design and Implementation; Data Collection Tools, Recruitment, and Retention. Twenty-eight studies described the active participation of the community in study design and study implementation. Some communities served in the form of advisory boards or steering committees to discuss possible challenges to study implementation (PRAISE, Okanagan, Internet Access, ESVHWP, CAAA, and Stress and Wellness). Another community took on a more active role proposing appropriate study designs to researchers (PAR CHP) or steering them away from potentially unsuccessful designs (ECFA). In several cases, community involvement tried to ease recruitment and study implementation by using local staff to administer surveys or interviews (Wai'anae, Seattle Homes, PACE, Disability Community, Okanagan, ESVHWP, Women and HIV Denial, and TEAL) or to act as survey helpers who were fluent in the languages of the target group (HERE).

Fifty studies reported community involvement with respect to recruiting and retaining subjects. Contact with community members generally raised the participation rate (Stress and Wellness, CHEP, EJS, ESVHWP, Oregon Migrants, and Positively Fit).

Community advisory boards or community-based organizations were often actively involved in recruiting participants. A commonly used strategy of recruitment was to seek participants within the social networks of community members who were involved in the research project (Health is Gold, PRAISE, Okanagan, PINAH, ESVHWP, Native Hawaiian, Disability Community, Seattle Homes, and Internet Access). Sierra Stanford emphasized personal contacts before the enrollment of the participants. One study (PRAISE) added an interim intervention for the delayed intervention control group, following advice of community members who were involved in the study. Another study (Chinese Elderly) changed from door-to-door recruitment to community meetings because team leaders thought that the latter would be more culturally appropriate for this particular community. In the HERE study, a union launched a mini-campaign to raise participation. Recruitment within social networks or the participation of volunteers led to high participation rates but also introduced the risk of selection bias; however, such bias was not measured directly,.

Intervention Design and Implementation. Of 30 studies with a planned or implemented intervention, more than 90 percent (28 studies) reported community involvement in intervention design,and implementation. Even among the 30 studies without a planned intervention (fully evaluated or otherwise), one-third of the studies (10 of 30) reported that communities were engaged in designing interventions for the community based on the results.

The magnitude of community involvement varied across these studies. Some researchers used findings of earlier community-based descriptive or exploratory studies as a base for intervention development (Healthy Home, Stress and Wellness, and East Baltimore). Others relied on advisory committees that co-designed the intervention and guaranteed its cultural appropriateness (ME2, PRAISE, Okanagan, PINAH, TEAL, and Health is Gold). Still others involved community organizations with active and creative leadership roles in shaping and implementing interventions (Sierra Stanford, South Asian, Survival Guide, East Baltimore, NY Immunization, ESVHWP, Stress and Wellness, Women and Heart Disease, ESVHWP, Stress and Wellness, and CMCA).

Two studies (Health is Gold and PRAISE) reported that, as a response to concerns of the community either during proposal writing or after funding, they implemented a delayed intervention for the control group. Another study stated that researchers agreed to implement the intervention sooner than intended after negotiations with its community steering committee (ESVHWP).

Feedback from communities also resulted in changed and adapted interventions to deal with the needs and priorities of the target groups (PACE, PINAH, and Health is Gold). Some studies undertook additional efforts to be flexible in addressing community needs and removing barriers specific to the intervention community that could otherwise have compromised participation or intervention. These steps included providing native speakers, child care, transportation, or small stipends (ME2, South Asian, Survival Guide, Healthy Home, Health is Gold, and Korean Study). One study related a negative impact of community involvement; the Korean Study Breast and Cervical Cancer Intervention could not be fully implemented because of a lack of community staff.

Translation of Research Findings. We reviewed the studies to identify those in which communities were involved in translating research findings into demonstrable policy change, either in civic bodies or at private institutions and local levels. Three of the 60 studies reported demonstrable policy change in civic bodies as a result of the intervention (EJS, CMCA, and PAR CHP) through the efforts of the community collaborators. EJS led to a presentation of findings to the House Agricultural Committee of the North Carolina General Assembly, followed by subsequent changes in policy. As a result of the CMCA study, policies were altered to reduce youth access to alcohol through changes in procedures and practices in the communities via alcohol merchants, law enforcement and criminal justice, community events, hotels, media, treatment agencies, and religious venues. PAR CHP, partly through supporting data from its survey, prompted the city council in the community to pass an ordinance to create nonsmoking areas. Five studies resulted in changes at private institutions or local levels through the efforts of community collaborators (Bingham, Healthy Neighborhoods, HERE, Stress and Wellness, and Poultry Slaughterhouse).

Five studies had the potential for change in policy through the generation of plans addressing the specific health concern (AABLH, ECFA, James Bay, TEAL, and NRMNC). They did not report the impact of these plans, however.

Integration and Sustainability. Thirteen studies reported on the sustainability of programs or interventions. An additional 28 studies detailed the integration or application of findings to achieve changes that affect health or other aspects of daily life.

Some projects achieved temporary sustainability of programs by acquiring additional grants for further research (CHEP, Oregon Migrants, and Kahnawake) or through local funding (Healthy Neighborhoods, Wai’anae, East Baltimore, and Glades) initiated by community organizations. One screening program reported sustainability as a result of the community’s closer contact to health clinics during the research (Korean Study).

Multiple studies reported sustainable changes in policies or other aspects of daily life through the presentation and application of findings (Healthy Neighborhoods, CHEP, CMCA, HERE, Stress and Wellness, NRMNC, Bingham, Poultry Slaughterhouse, Madison County, PAR CHP, and EJS). For example, Healthy Neighborhoods was able to re-establish evening and night bus services and to have tobacco billboards removed. The HERE project managed to reduce the workload of hotel room cleaning staff. Communities also frequently used the CBPR project findings to develop action plans for other programs and to apply for grants (Native Hawaiian, Glades, Survival Guide, Diabetes in East Harlem, and Perspectives of Latinas).

Community Involvement in All Aspects of Research. Of the 60 studies relevant to KQs 2 and 3, three studies reported community involvement in all aspects of the research (Wai'anae, Kahnawake, CHEP, and HERE). Of these studies, one was an evaluated intervention with a quasi-experimental design (Wai'anae); another was an incompletely evaluated intervention (Kahnawake); and two were were nonexperimental studies that did not include any interventions (CHEP and HERE).

Key Question 3: Outcomes of Community-based Participatory Research

This key question focused on whether CBPR projects have had intended effects in terms of better research, outcomes relating to community capacity, and health outcomes broadly defined. The first issue is addressed essentially through our efforts to grade the quality of the 12 individual studies with completed, evaluated interventions; similarly, the third question about health outcomes relates only to those 12 studies. By contrast, questions about positive outcomes for community capacity reflect results from all 60 studies reviewed for KQs 2 and 3.

Improved Research Quality Outcomes

As discussed in Chapter 2, we scored the 12 studies with completed interventions in terms of two outcome evaluations: average scores for research quality and for adherence to the principles of community participation (recorded in Table 6). Higher scores reflect better quality. The average scores could range from 1 to 3, based on the quality grading form provided in Appendix B. Although the scores on these two dimensions are not directly comparable, the average research quality scores ranged from 1.5 to 2.8 with a mean of 2.3, while the community participation quality scores ranged from 1.6 to 3.0 with an average of 2.2.

As would be expected, research quality scores reflected research design rigor. Experimental studies averaged 2.7; quasi-experimental, 2.2; one-group pretest and posttest design, 1.9; and the one nonexperimental intervention study, 1.5. Community participation scores appeared less closely associated with study design, with the experimental studies averaging 2.3; quasi-experimental, 2.2; one-group and posttest design, 2.3; and the nonexperimental study, 1.95.

We also conducted quality ratings on the three observational studies that we deemed were of sufficiently strong design to permit generalizability to a population beyond that of the study sample. Many observational studies reviewed served primarily as baseline data for a community assessment or an intervention study with no attempt at representative sampling techniques, thus were not included in the quality ratings. We used slightly different criteria for research quality ratings with the observational studies, primarily related to the lack of an intervention. Research quality rating scores for the three observational studies were 1.4, 2.6 and 2.1, with community participation scores of 1.6, 2.6, and 2.0, respectively.

Quality rating scores for research elements primarily reflect internal and external validity. Recognizing that RCTs are not always feasible or ethically appropriate in CBPR where one group would be denied an intervention, we rated the intervention studies based on specific criteria reflecting reliability and validity rather than requiring a randomized controlled trial for the highest quality rating. While the four experimental completed intervention studies were all RCTs, a study using group assignment with careful matching of intervention and comparison groups would also have been included. Studies were downgraded, for example, if the study population differed significantly from the population to which findings were generalized, if there was significant loss to followup, or if the intervention and comparison groups were not comparable demographically. For observational studies, we downgraded those that failed to adequately justify their sampling procedure or the control of confounders.

In abstracting data from these studies, we documented evidence of either enhanced or diminished research quality attributable to the CBPR method; we focused on the categories of methodology, measures, recruitment, intervention, analysis, dissemination, and outcomes. Of the 12 completed intervention studies, 11 reported enhanced intervention quality related to community involvement. Only two studies reported improved outcomes related to CBPR. Eight noted enhanced recruitment, four reported improved research methods and dissemination, and three described improved measures. Very little evidence of diminished research quality resulting from CBPR was reported. One study suggested possible recruitment bias (NY Immunization) and another reported that the CBPR approach pulled staff away from intervention delivery, thus reducing the exposure to the intervention (Korean Study).

Community Capacity Outcomes

Improved community capacity is rarely discussed as the objective of the study or the intervention. However, in describing their CBPR methods, authors clearly considered improved community capacity to be an essential component of the process. Of the 60 studies in this review, 47 reported improved community capacity as an outcome associated with the study. Generally, authors focused on the greater capacity of the participant community rather than that of the research community, possibly reflecting the biases of the authors who were primarily academic researchers. Only nine studies documented the improved capacity of the researchers and research organization from collaboration with the community (James Bay, CAAA, Health is Gold, Kahnawake, Poultry Slaughterhouse, Disability Community, NRMNC, ESVHWP, and Korean Study). In our review of the definitional literature, however, development of individual investigator and research institution capacity to interact better with the community on research issues is a significant expectation of CBPR.

Seven studies mentioned the communities' enhanced capacity to create change (Poultry Slaughterhouse, HERE, Madison County, Native Hawaiian, TAS, Oregon Migrants, and Stress and Wellness). Increases in community capacity happen either directly through the research results or indirectly through the process of participating in the research.

Studies demonstrated enhanced community capacity in numerous ways. Additional grant funding obtained by the community was one such outcome (Haida Gwaii, CHEP, Welcome Home, Stress and Wellness, Healthy Neighborhoods, NRMNC, and ESVHWP). Another positive result was the jobs created by the collaboration (ESVHWP, NRMNC, Wai'anae, and Project TEAL). Skills building (CMCA and East Baltimore) and partnership and coalition development (ESVHWP, Okanagan, and Wai'anae) were other beneficial outcomes of the CBPR activities. Finally, numerous studies mentioned the communities' enhanced capacity to conduct research, either in combination with other outcomes of community capacity or as the sole evidence of enhanced community capacity (James Bay, Disability community, Korean Study, PRAISE, Sierra Stanford, Healthy Home, WE ACT, Internet Access, NY Immunization, AABLH, Women and HIV Denial, Controlling pesticides, EJS, La Vida, PAR CHP, PACE, and Wai'anae).

Health Outcomes

Among the 12 studies evaluating completed interventions addressing health outcomes, 2 dealt with physiologic health outcomes (East Baltimore and Okanagan). Three studies assessed cancer screening behavior (Health is Gold, Korean Study, and Wai'anae) and four others addressed other types of behavior change, such as alcohol consumption, immunization rates, and safer sex behavior (CMCA, HIV Latina, NY Immunization, and Women and HIV Denial). Finally, three studies measured the impact of the intervention on psychosocial outcomes such as emotional support, empowerment, and employee well-being (Sierra Stanford, Internet Access, and Stress and Wellness).

The four RCTs reviewed all resulted in at least some modest positive effects; eight non-RCTs showed more mixed results. Given the highly varied health outcomes, measurement strategies, and intervention approaches used, comparing studies to assess relative impact on health outcomes is not possible. Cost-effectiveness data would have allowed us to compare similar outcomes from CBPR studies and more traditional research studies, but no study provided such data.

From our review of the published data on these studies, we were unable to determine whether the modest positive findings reported could be attributed to CBPR methods. Several authors mentioned positive effects of their CBPR approaches on research quality and participation rates, but we could not ascertain whether these benefits directly improved study outcomes relative to nonparticipatory research approaches.

Key Question 4: Funding Criteria for Community-based Participatory Research

AHRQ asked the EPC investigators to address several specific questions about CBPR funding, drawing on the lessons learned through synthesis of the literature on the first three key questions. Specifically, in regard to the criteria and processes to be used for review of CBPR in grant proposals:

1. What are current approaches by funders to soliciting and reviewing CBPR grant proposals?
2. What criteria should high-quality grant applications meet?
3. What guidance can be offered to funding organizations and applicants?
4. Who should be involved in the review process? What should be the role of the community?

Current Approaches by Funders to Solicit and Review CBPR Proposals

The CDC and NIEHS have been at the forefront of Federal funding for CBPR to date. Specific initiatives by these agencies include many of the studies we reviewed. For example, the CDC funded three Urban Research Centers in 1995, and NIEHS sponsored two CBPR funding vehicles—Environmental Justice and Community Based Participatory Research in Environmental Health—since 1993. In 2002–2003, the CDC funded 26 new projects under the "Community-based Participatory Prevention Research" grant mechanism.

Private foundations also support CBPR; the W. K. Kellogg Foundation and Annie E. Casey Foundation are among the leaders in the private sector. The Kellogg Foundation funded a Community-based Public Health Initiative (CBPHI) in 1991 that included several sites that emphasized community-university-agency partnerships to address health disparities. This program prompted the creation of the Community Health Scholars Program, designed to fund postdoctoral applicants seeking training in CBPR (http://sph.umich.edu/chsp/index.shtml).

The considerable interest at the Federal level in funding CBPR is further evidenced by the creation of an Interagency Working Group for Community-based Participatory Research, which has begun to assemble information about existing funding mechanisms for CBPR.[60] Given the rising interest and monetary support for this work, AHRQ sponsored a national meeting in 2001 to explore the current role of CBPR and how best to foster good proposals and successful initiatives in this arena. Participants at that meeting strongly recommended that AHRQ commission this systematic review of issues relating to CBPR, with a view to clarifying this entire research enterprise for current and potential supporters.

Depending on the agency, CBPR proposals may be reviewed through existing study sections or through a special emphasis panel. Because CBPR is an excellent approach to translational research, study sections designated for this purpose are particularly appropriate. Many parts of the National Institutes of Health (NIH) refer to these as R18 proposals. These would include, for example, Demonstration and Education Research within the National Heart, Lung and Blood

Institute and Translational Research within the National Institute of Diabetes and Disgestive Kidney Diseases (both of which use special emphasis or ad hoc panels for review).

A new study section within the National Cancer Institute is Community Level Health Promotion. Standing study sections generally require a multiyear tenure by committee members, and they review all grants deemed relevant to their focus. A special emphasis panel or ad hoc committee is assembled specifically for the purpose of reviewing responses to a Request for Application (RFA) or more narrowly defined research area. The advantage of a special emphasis panel is that specific instructions, pertinent to the proposals being reviewed, are sent to reviewers for each meeting. Reviewers selected are also more likely to be content experts with respect to the focus of the RFA.

Reviewers for all proposals generally receive review criteria to guide their efforts. These criteria often follow the framework of the standard proposal format and commonly include such broad sections as Significance, Innovation, Approach (methods), Investigators, Research Environment, Budget, and Human Subjects.

Discussions with individuals from the NIH and CDC who are involved with generating RFAs and refining the review process highlighted the need for brief guidance materials about CBPR for reviewers less familiar with this approach. They recommended fact sheets that could be distributed between sessions to standing panels (with the assumption that guidance arriving with a large box of grants will be less likely to be read) or with other orientation materials for special emphasis panels. Also recommended were guidelines for those writing RFAs designed to encourage CBPR submissions and offer guidance for researchers submitting CBPR proposals.

Criteria for High-Quality Grant Applications

As described above, a few special funding mechanisms to date have focused specifically on promoting CBPR. Perhaps the bigger challenge is to obtain funding for CBPR through more conventional review mechanisms in which reviewers may be less familiar with and perhaps even skeptical about CBPR. Not only will a broader range of funding options for CBPR expand the options for funding CBPR efforts; it can serve to educate other scientists about the potential rigor and “added value” of CBPR.

Conventional Research Criteria

Researchers who are applying for funds to support CBPR often fail to address all the criteria for high-quality *conventional* research, and this may be the biggest mistake in seeking CBPR funding. We identified relatively few high-quality completed interventions or observational studies relative to what appears to be many excellent collaborations based on CBPR principles. This mismatch raises the question of whether researchers assume that effectively combining high-quality conventional research with CBPR collaborations is not possible. If so, they may simply choose not to embark on such ventures.

CBPR Criteria

In addition to meeting criteria for conventional research proposal review, a proposal based on CBPR should clearly describe the added value that this approach brings. This is particularly important when reviewers can be assumed to be unfamiliar with CBPR, which is still probably a safe assumption. The proposal should not simply describe CBPR criteria; it should also discuss the potential benefits for both research quality and the community. Table 1 (p. 15) provides a detailed framework of CBPR principles and their benefits. This information is also available on the RTI Web site (http://www.rti.org) in the document "CBPR Reviewer and Applicant Guidelines," (CBPR Exhibit 1).

Guidance for Funding Organizations and Applicants

Based on the results of our literature review, discussion with Federal funders, a review of funding agency Web sites, and the criteria for funding outlined above, we have created three concise documents that provide suggested guidance to funding organizations, reviewers, and applicants: "CBPR Reviewer and Applicant Guidelines," "CBPR Reviewer Checklist," and "CBPR Requests for Applications and Peer Review." These materials are included online (at http://www.rti.org) as CBPR Exhibits 1, 2, and 3, respectively. For a more detailed checklist, we refer the reader to work by Green and colleagues, "Guidelines and Categories for Classifying Participatory Research Projects in Health Promotion,"[221] which appraises the extent to which proposals or projects align with principles of participatory research.

Because the grant proposal and review process is somewhat standardized across the U.S. Department of Health and Human Services agencies (using the PHS-398 package, for instance), and because these agencies are likely to involve the most rigorous review process, we elected to use the review criteria generally used by these agencies in developing a prototype guideline document. The "CBPR Reviewer and Applicant Guidelines" document (Exhibit 1) is adapted from NIDDK review criteria for translational research, with components for CBPR that we have added for this particular purpose. However, these guidelines are our recommendations and have not been formally adopted by AHRQ or other components of HHS.

The "CBPR Reviewer Checklist" (Exhibit 2) goes one step further, adding to these suggested guidelines more detail regarding what should be expected in a high-quality proposal involving CBPR. Because this example is modeled on what we might expect or advise for Federal research agencies, it may not translate directly to grant review mechanisms that foundations and other funding sources might use. These are highly variable across such funding organizations, but we believe that their review procedures will often include the primary components covered in Exhibits 1 and 2; thus, such organizations could adapt this checklist to their own purposes in a fairly straightforward manner.

Finally, as outlined in "CBPR Requests for Applications and Peer Review" (Exhibit 3), our discussions with funders and review of the literature led us to recommend that review panels include academic experts in the content area and in CBPR methods, and that the panels also involve individuals who have expertise in both arenas. Our discussions did not lead to a clear recommendation regarding how community members should be involved in the peer review process for CBPR. Some precedent exists for "citizen involvement" on academic and industry advisory committees and review panels for activities such as Institutional Review Boards. Federal staff, with whom we discussed this issue, reported limited experience with community members on review panels, and they had mixed feelings about the best way to include community representatives in the process.

An underlying concern is the potential discomfort for community members who are put into a situation in which the language and subject matter are quite foreign. One NIH contact described a situation in which community members participated in a review for which no prior orientation had been held to enable them to discuss their respective perspectives. This resulted in a very tense and unproductive session. Thus, on the one hand, without a thorough understanding of research principles, lay persons may find it difficult to understand and contribute to much of the discussion. On the other hand, a community member is uniquely qualified to help reviewers critique the proposed approach to community participation.

In short, more careful and creative thought is needed concerning how to solicit input from community members. Some possible solutions to consider include the following:

- Provide extensive orientation for individual community members serving on review panels.
- Oriente the academic panel members to the role of community members.
- Convene an orientation meeting before the formal review to discuss review expectations, ground rules, questions, and concerns.
- Invite community representatives who have been involved in CBPR and hence are more knowledgeable about research.
- Ask community representatives to read abstracts and participate in the discussion but not to serve as a primary or secondary reviewer.
- Ask community representatives to read abstracts and relevant CBPR components of proposals and be asked to assess those components.
- Ask principal investigators to submit two versions of the proposal abstract: one for a lay audience and one for academics.
- Hold primary reviewers for each proposal responsible for engaging community representatives in the discussion in a positive and nonthreatening manner.
- Require the resulting summary statement to include a section reflecting comments from community representatives, which may increase the likelihood that the primary reviewers will involve community representatives in a meaningful way.

Table 4. Full and abbreviated titles and citations

Acronym	Full Study Name	Study References
Studies that Implemented and Evaluated Interventions		
CMCA	Communities Mobilizing For Change on Alcohol	Wagenaar AC, Murray DM, Wolfson M, et al. Communities Mobilizing for Change on Alcohol: Design of a Randomized Community Trial. J Comm Psychol 1994; Special Issue:79-101.[114] Wagenaar AC, Perry CL. Community Strategies for the Reduction of Youth Drinking: Theory and Application. J Res Adolesc 1994; 4(2):319-45.[117] Wagenaar AC, Toomey TL, Murray DM, et al. Sources of alcohol for underage drinkers. J Stud Alcohol 1996; 57(3):325-33.[118] Wagenaar AC, Gehan JP, Jones Webb R et al. Communities Mobilizing for Change on Alcohol: Lessons and results from a 15-community randomized trial. J Comm Psychol 1999; 27(3):315-26.[116] Wagenaar AC, Murray DM, Gehan JP, et al. Communities mobilizing for change on alcohol: outcomes from a randomized community trial. J Stud Alcohol 2000; 61(1):85-94.[115] Wagenaar AC, Murray DM, Toomey TL. Communities mobilizing for change on alcohol (CMCA): effects of a randomized trial on arrests and traffic crashes. Addiction. 2000; 95(2):209-17.[113]
East Baltimore	East Baltimore Health Promotion Program	Green LW, Levine DM, Deeds S. Clinical Trials of Health Education for Hypertensive Outpatients: Design and Baseline Data. Prev Med 1975; 4:417-25.[119] Levine DM, Lawrence WG, Deeds SG, et al. Health Education for Hypertensive Patients. J Am Med Assoc 1979; 241(16):1700-3.[120] Morisky DA, Levine DM, Green LW, et al. Five-Year Blood Pressure Control and Mortality Following Health Education for Hypertensive Patients. Am J Pub Health 1983; 73(2):153-62.[121] Levine DM, Becker DM, Bone LR, et al. A Partnership with Minority Populations: A Community Model of Effectiveness Research. Ethnic Dis 1992; 2:296-305.[122]
Health is Gold	Health Is Gold! Vietnamese Community Health Promotion Project	Lam TK, McPhee SJ, Mock J, et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. J Gen Intern Med 2003; 18(7):516-24.[123]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Sierra Stanford	Sierra Stanford Partnership	Koopman C, Angell K, Turner-Cobb JM, et al. Distress, coping, and social support among rural women recently diagnosed with primary breast cancer. Breast J 2001; 7(1):25-33.[124] Angell KL, Kreshka MA, McCoy R, et al. Psychosocial intervention for rural women with breast cancer. J Gen Intern Med 2003; 18(7):499-507.[125]
HIV Latina	HIV Testing and Counseling for Latina Women	Flaskerud JH, Calvillo ER. Beliefs about AIDS, health, and illness among low-income Latina women. Res Nurs Health 1991; 14(6):431-8.[130] Flaskerud JH, Nyamathi AM. Home medication injection among Latina women in Los Angeles: implications for health education and prevention. AIDS Care 1996; 8(1):95-102.[128] Flaskerud JH, Uman G, Lara R, et al. Sexual Practices, Attitudes and Knowledge Related to HIV Transmission in Low Income Los Angeles Hispanic Women. J Sex Res 1996; 33(4):343-53.[129] Flaskerud JH, Nyamathi AM, Uman GC. Longitudinal effects of an HIV testing and counseling programme for low-income Latina women. Ethn Health 1997; 2(1-2):89-103.[126] Flaskerud JH, Nyamathi AM. Collaborative inquiry with low-income Latina women. J Health Care Poor Underserv 2000; 11(3):326-42.[127]
Internet Access	Internet Access and Empowerment: A Community-Based Health Initiative	Masi CM, Suarez-Balcazar Y, Cassey MZ, et al. Internet access and empowerment: a community-based health initiative. J Gen Intern Med 2003; 18(7):525-30.[131]
Korean Study	The Korean Study Breast and Cervical Cancer Screening Intervention	Chen AM, Wismer BA, Lew R *et al*. 'Health is strength': a research collaboration involving Korean Study Americans in Alameda County. Am J Prevent Med 1997; 13(6 Suppl):93-100.[133] Wismer BA, Moskowitz JM, Chen AM, et al. Rates and independent correlates of Pap smear testing among Korean Study-American women. Am J Public Health 1998; 88(4):656-60.[134] Wismer BA, Moskowitz JM, Chen AM, et al. Mammography and clinical breast examination among Korean American women in two California counties. Prev Med 1998; 27(1):144-51. [222]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Korean Study (continued)		Wismer BA, Moskowitz JM, Min K, et al. Interim assessment of a community intervention to improve breast and cervical cancer screening among Korean Study American women. J Public Health Manag Pract 2001; 7(2):61-70.[132]
Okanagan	The Okanagan Diabetes Project	Daniel M, Green LW, Marion SA, et al. Effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada. Soc Sci Med 1999; 48(6):815-32.[135]
Wai’anae	The Wai’anae Cancer Research Project	Banner RO, DeCambra H, Enos R et al. A breast and cervical cancer project in a native Hawaiian community: Wai'anae cancer research project. Prevent Med 1995; 24(5):447-53.[138] Matsunaga DS, Enos R, Gotay CC, et al. Participatory research in a Native Hawaiian community. The Wai'anae Cancer Research Project. Cancer 1996; 78(7 Suppl):1582-6.[137] Gotay CC, Banner RO, Matsunaga DS, et al. Impact of a culturally appropriate intervention on breast and cervical screening among native Hawaiian women. Prev Med 2000; 31(5):529-37.[136]
NY Immunization	The New York Immunization Project	Rosenberg Z, Findley S, McPhillips S, et al. Community-based strategies for immunizing the "hard-to-reach" child: the New York State immunization and primary health care initiative. Am J Prev Med 1995; 11(3 Suppl):14-20.[139]
Stress and Wellness	Stress and Wellness Project	Israel BA, Schurman SJ, House JS. Action research on occupational stress: involving workers as researchers. Int J Health Serv 1989; 19(1):135-55.[32] Hugentobler MK, Israel BA, Schurman SJ. An action research approach to workplace health: Integrating methods. Health Educ Q 1992; 19(1):55-76.[140] Heaney CA, Israel BA, Schurman SJ, et al. Industrial Relations, Worksite Stress Reduction, and Employee Well-Being: A Participatory Action Research Investigation. J Org Behav 1993; 14(5):495-510.[141] Baker EA, Israel BA, Schurman SJ. A participatory approach to worksite health promotion. J Ambul Care Manage 1994; 17(2):68-81.[142] Schurman SJ. Making the 'new American workplace' safe and healthy: a joint labor-management-researcher approach. Am J Indust Med 1996; 29(4):373-7.[143]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Women and HIV Denial	Women Dedicated to demolishing denial: HIV risk reduction for lesbians and bisexual women	Stevens PE. HIV Prevention Education for Lesbians and Bisexual Women: A Cultural Analysis of a Community Intervention. Soc Sci Med 1994; 39(11):1565-78.[144] Stevens PE, Hall JM. Participatory action research for sustaining individual and community change: a model of HIV prevention education. AIDS Educ Prev 1998; 10(5):387-402.[145]
Interventions Either Not Completed or Not Fully Evaluated		
CAAA	Community Action Against Asthma	Clark NM, Brown RW, Parker E, et al. Childhood asthma. Environ Health Perspect 1999; 107 Suppl 3:421-9.[148] Keeler GJ, Dvonch T, Yip FY et al. Assessment of personal and community-level exposures to particulate matter among children with asthma in Detroit, Michigan, as part of Community Action Against Asthma (CAAA). Environment Health Perspect 2002; 110 Suppl 2:173-81.[146] Parker EA, Israel BA, Williams M, et al. Community action against asthma: examining the partnership process of a community-based participatory research project. J Gen Intern Med 2003; 18(7):558-67.[147]
PRAISE	PRAISE!	Corbie-Smith G, Ammerman AS, Katz ML, et al. Trust, benefit, satisfaction, and burden: a randomized controlled trial to reduce cancer risk through African-American churches. J Gen Intern Med 2003; 18(7):531-41.[149] Ammerman A, Washington C, Jackson B, et al. The PRAISE! Project: A church-based nutrition intervention designed for cultural appropriateness, sustainability and diffusion. J Health Promotion Pract In press.[150]
Seattle Homes	Seattle King County Healthy Homes Project	Krieger JW, Song L, Takaro TK, et al. Asthma and the home environment of low-income urban children: preliminary findings from the Seattle-King County healthy homes project. J Urban Health 2000; 77(1):50-67.[151]
Seattle Vaccine	Seattle Vaccine	Krieger JW, Castorina JS, Walls ML, et al. Increasing influenza and pneumococcal immunization rates: a randomized controlled study of a senior center-based intervention. Am J Prev Med 2000; 18(2):123-31.[152]
TEAL	Tribal Efforts Against Lead	Kegler MC, Malcoe LH, Lynch RA, et al. A community-based intervention to reduce lead exposure among Native American children. Environ Epidemiol Toxicol 2000; 2:121-32.[153]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
ESVHWP	East Side Village Health Worker Partnership	Schulz AJ, Israel BA, Becker AB, et al. "It's a 24-hour thing ... a living-for-each-other concept": identity, networks, and community in an urban village health worker project. Health Educ Behav 1997; 24(4):465-80.[163] Parker EA, Schulz AJ, Israel BA, Hollis R. Detroit's East Side Village Health Worker Partnership: community-based lay health advisor intervention in an urban area. Health Educ Behav 1998; 25(1):24-45.[162] Schulz AJ, Parker EA, Israel BA, Becker AB, Maciak BJ, Hollis R. Conducting a participatory community-based survey for a community health intervention on Detroit's east side. J Public Health Manag Pract 1998; 4(2):10-24.[106] Schulz A, Israel B, Williams D, et al. Social inequalities, stressors and self reported health status among African American and white women in the Detroit metropolitan area. Soc Sci Med 2000; 51(11):1639-53.[161] Parker EA, Lichtenstein RL, Schulz AJ et al. Disentangling measures of individual perceptions of community social dynamics: results of a community survey. Health Educ Behav 2001; 28(4):462-86.[159] Schulz AJ, Israel BA, Parker EA, Lockett M, Hill Y, Wills R. The East Side Village Health Worker Partnership: integrating research with action to reduce health disparities. Public Health Reports. 2001; 116(6):548-57.[158] Schulz A, Parker E, Israel DB, et al. Social context, stressors, and disparities in women's health. J Am Med Womens Assoc 2001; 56(4):143-9.[160] Becker AB, Israel BA, Schulz AJ, et al. Predictors of perceived control among African American women in Detroit: exploring empowerment as a multilevel construct. Health Educ Behav 2002; 29(6):699-715.[156] Israel BA, Farquhar SA, Schulz AJ, et al. The relationship between social support, stress, and health among women on Detroit's East Side. Health Educ Behav 2002; 29(3):342-60.[157] Schulz AJ, Parker EA, Israel BA, Allen A, Decarlo M, Lockett M. Addressing social determinants of health through community-based participatory research: the East Side Village Health Worker Partnership. Health Educat Behav 2002; 29(3):326-41.[112]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
ESVHWP (continued)		van Olphen J, Schulz A, Israel B, et al. Religious involvement, social support, and health among African-American women on the east side of Detroit. J Gen Intern Med 2003; 18(7):549-57.[155]
Elderly in Need	Elderly in Need	Moyer A, Coristine M, Jamault M, Roberge G, O'Hagan M. Identifying older people in need using action research. J Clin Nurs 1999; 8(1):103-11.[154] Moyer A, Coristine M, MacLean L, Meyer M. A model for building collective capacity in community-based programs: the Elderly in Need Project. Pub Health Nurs 1999; 16(3):205-14.[92]
Haida Gwaii	Haida Gwaii Diabetes Project	Herbert CP. Community-based research as a tool for empowerment: the Haida Gwaii Diabetes Project example. Can J Pub Health. Revue Canadienne De Sante Publique. 1996; 87(2):109-12.[77] Evans DT, Fullilove MT, Green L, et al. Awareness of environmental risks and protective actions among minority women in Northern Manhattan. Environ Health Perspect 2002; 110 Suppl 2:271-5.[165] Green L, Fullilove M, Evans D, et al. "Hey, mom, thanks!": use of focus groups in the development of place-specific materials for a community environmental action campaign. Environ Health Perspect 2002; 110 Suppl 2:265-9.[100] Perera FP, Illman SM, Kinney PL et al. The challenge of preventing environmentally related disease in young children: community-based research in New York City. Environment Health Perspect 2002; 110(2):197-204.[164]
Healthy Home	Healthy Home, Healthy Child	Green L, Fullilove M, Evans D, et al. "Hey, mom, thanks!": use of focus groups in the development of place-specific materials for a community environmental action campaign. Environ Health Perspect 2002; 110 Suppl 2:265-9.[100] Perera FP, Illman SM, Kinney PL *et al*. The challenge of preventing environmentally related disease in young children: community-based research in New York City. Environ Health Perspect 2002; 110(2):197-204.[164] Evans DT, Fullilove MT, Green L, et al. Awareness of environmental risks and protective actions among minority women in Northern Manhattan. Environ Health Perspect 2002; 110 Suppl 2:271-5.[165]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Kahnawake	Kahnawake	Macaulay AC, Delormier T, McComber AM *et al*. Participatory research with native community of Kahnawake creates innovative Code of Research Ethics. Can J Pub Health 1998; 89(2):105-8.[78] Macaulay AC, Paradis G, Potvin L *et al*. The Kahnawake Schools Diabetes Prevention Project: intervention, evaluation, and baseline results of a diabetes primary prevention program with a native community in Canada. Prev Med 1997; 26(6):779-90.[166] Potvin L, Cargo M, McComber AM, et al. Implementing participatory intervention and research in communities: lessons from the Kahnawake Schools Diabetes Prevention Project in Canada. Soc Sci Med 2003; 56(6):1295-305.[167] Macaulay AC, Cross EJ, Delormier T, Potvin L, Paradis G, McComber A. Developing a Code of Research Ethics for research with a Native community in Canada: a report from the Kahnawake Schools Diabetes Prevention Project. Int J Circumpolar Health 1998; 57 Suppl 1:38-40.[168] McComber AM, Macaulay AC, Kirby R, et al. The Kahnawake Schools Diabetes Prevention Project: community participation in a diabetes primary prevention research project. Int J Circumpolar Health 1998; 57 Suppl 1:370-4.[169]
La Vida	La Vida	Maciak BJ, Guzman R, Santiago A, Villalobos G, Israel BA. Establishing LA VIDA: a community-based partnership to prevent intimate violence against Latina women. Health Educ Behav 1999; 26(6):821-40.[170]
ME2	Mom Empowerment Too!	Baldwin JH, Rawlings A, Marshall ES, et al. Mom empowerment, too! (ME2): a program for young mothers involved in substance abuse. Public Health Nurs 1999; 16(6):376-83.[171]
NRMNC	The Nuclear Risk Management for Native Communities Project	Quigley D, Handy D, Goble R, Sanchez V, George P. Participatory research strategies in nuclear risk management for native communities. J Health Comm. 2000; 5(4):305-31.[70]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
PACE	Preventing Agricultural, Chemical Exposure in North Carolina Farmworkers	Arcury TA, Austin CK, Quandt SA, et al. Enhancing community participation in intervention research: farmworkers and agricultural chemicals in North Carolina. Health Educ Behav 1999; 26(4):563-78.[172] Quandt SA, Arcury TA, Pell AI. Something for everyone? A community and academic partnership to address farmworker pesticide exposure in North Carolina. Environ Health Perspect 2001; 109 Suppl 3:435-41.[173]
PINAH	The Partners for Improved Nutrition and Health Project	Eng E, Parker E. Measuring community competence in the Mississippi Delta: the interface between program evaluation and empowerment. Health Educ Q 1994; 21(2):199-220.[174]
Preventing Arson	Preventing Halloween Arson	Maciak BJ, Moore MT, Leviton LC, et al. Preventing Halloween arson in an urban setting: a model for multisectoral planning and community participation. Health Educ Behav 1998; 25(2):194-211.[175]
Survival Guide	Survival Guide	Factor SH, Galea S, de Duenas Geli LG, et al. Development of a "survival" guide for substance users in Harlem, New York City. Health Educ Behav 2002; 29(3):312-25.[176] Galea S, Factor SH, Palermo AG, Aaron D, Canales E, Vlahov D. Access to resources for substance users in Harlem, New York City: Service provider and client perspectives. Health Educ Behav 2002; 29(3):296-311.[177]
Women and Heart Disease	Women and Heart Disease	Arthur HM, Wright DM, Smith KM. Women and heart disease: the treatment may end but the suffering continues. Can J Nurs Res 2001; 33(3):17-29.[178]
Noninterventional Studies		
AALBH	African Americans Building a Legacy of Health	Sloane DC, Diamant AL, Lewis LB, et al. Improving the nutritional resource environment for healthy living through community-based participatory research. J Gen Intern Med 2003; 18(7):568-75.[179]
Hospice Access	Hospice Access and Use by African-Americans	Reese DJ, Ahern RE, Nair S, et al. Hospice access and use by African Americans: addressing cultural and institutional barriers through participatory action research. Soc Work 1999; 44(6):549-59.[180]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Oregon Migrants	Oregon Migrant Farm Workers	McCauley LA, Beltran M, Phillips J, et al. The Oregon migrant farmworker community: an evolving model for participatory research. Environ Health Perspect 2001; 109 Suppl 3:449-55.[182] McCauley LA, Lasarev MR, Higgins G, et al. Work characteristics and pesticide exposures among migrant agricultural families: a community-based research approach. Environ Health Perspect 2001; 109(5):533-8.[181]
Aboriginal	Aboriginal Grandmothers	Dickson G. Aboriginal grandmothers' experience with health promotion and participatory action research. Qualit Health Res 2000; 10(2):188-213.[193] Dickson G, Green KL. Participatory action research: lessons learned with Aboriginal grandmothers. Health Care Women Int 2001; 22(5):471-82.[192]
Bingham	Bingham	Eng E, Blanchard L. Action-Oriented Community Diagnosis: A Health Education Tool. Intnl Quarter Comm Health Educ 1991; 11(2):93-110.[195]
Chinese Elderly	Chinese American Elderly with Osteoporosis	Lauderdale DS, Kuohung V, Chang SL, et al. Identifying older Chinese immigrants at high risk for osteoporosis. J Gen Intern Med 2003; 18(7):508-15.[199]
CHEP	Community Health Environment Program	Ledogar RJ, Acosta LG, Penchaszadeh A. Building international public health vision through local community research: the El Puente-CIET partnership. Am J Public Health 1999; 89(12):1795-7.[200] Ledogar RJ, Penchaszadeh A, Garden CC, et al. Asthma and Latino cultures: different prevalence reported among groups sharing the same environment. Am J Public Health 2000; 90(6):929-35.[201] Corburn J. Combining community-based research and local knowledge to confront asthma and subsistence-fishing hazards in Greenpoint/Williamsburg, Brooklyn, New York. Environ Health Perspect 2002; 110 Suppl 2:241-8.[202]
Controlling Pesticides	Controlling Pesticide Exposure to Children of Farmworkers	Minkler M, Thompson M, Bell J, Rose K. Contributions of community involvement to organizational-level empowerment: the Federal Healthy Start experience. Health Educ Behav 2001; 28(6):783-807.[189]
Diabetes in East Harlem	Diabetes in East Harlem	Horowitz CR, Williams L, Bickell NA. A community-centered approach to diabetes in East Harlem. J Gen Intern Med 2003; 18(7):542-8.[190]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Disability Community	Disability Community	Minkler M, Fadem P, Perry M, Blum K, Moore L, Rogers J. Ethical dilemmas in participatory action research: a case study from the disability community. Health Educ Behav. 2002; 29(1):14-29.[191]
EJS	Environmental Justice Study	Wing S, Wolf S. Intensive livestock operations, health, and quality of life among eastern North Carolina residents. Environ Health Perspect 2000; 108(3):233-8.[215] Wing S, Cole D, Grant G. Environmental injustice in North Carolina's hog industry. Environ Health Perspect 2000; 108(3):225-31.[216]
ECFA	Ethnocultural Communities Facing AIDS	Adrien A, Godin G, Cappon P, et al. Overview of the Canadian study on the determinants of ethnoculturally specific behaviours related to HIV/AIDS. Can J Public Health 1996; 87 Suppl 1:S4-10.[203] Willms D, Bhatia R, Lowe J, Niemi F, Stewart D, Westmoreland-Traore J. Five conversations: reflections of stakeholders on the impact of the ethnocultural communities facing AIDS study. Can J Public Health 1996; 87 Suppl 1:S44-8, S49-53.[204] Willms D, Singer SM, Adrien A, et al. Participatory aspects in the qualitative research design of phase II of the ethnocultural communities facing AIDS study. Can J Public Health 1996; 87 Suppl 1:S15-25, S16-27.[205] Singer SM, Willms DG, Adrien A, et al. Many voices--sociocultural results of the ethnocultural communities facing AIDS study in Canada. Can J Public Health 1996; 87 Suppl 1:S26-32, S28-35.[206] Maticka-Tyndale E, Godin G, LeMay G, et al. Canadian ethnocultural communities facing AIDS: overview and summary of survey results from phase III. Can J Public Health 1996; 87 Suppl 1:S38-43, S42-8.[207] Cappon P, Adrien A, Godin G, et al. HIV/AIDS in the context of culture: selection of ethnocultural communities for study in Canada. Can J Public Health 1996; 87 Suppl 1:S11-4, S11-5.[208]
EBFP	Evaluation of the Blended Funding Project	Vander Stoep A, Williams M, Jones R, Green L, Trupin E. Families as full research partners: what's in it for us?. J Behav Health Serv Res. 1999; 26(3):329-44.[217]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Glades	The Glades Health Survey	Stratford D, Chamblee S, Ellerbrock TV, et al. Integration of a participatory research strategy into a rural health survey. J Gen Intern Med 2003; 18(7):586-8.[212]
Harlem Birth Right	The Harlem Birth Right Project	Mullings L, Wali A, McLean D, et al. Qualitative methodologies and community participation in examining reproductive experiences: the Harlem Birth Right Project. Matern Child Health J 2001; 5(2):85-93.[209]
HNP	Healthy Neighborhoods Project	el-Askari G, Freestone J, Irizarry C, et al. The Healthy Neighborhoods Project: a local health department's role in catalyzing community development. Health Educ Behav 1998; 25(2):146-59.[218] Minkler M. Using Participatory Action Research to build Healthy Communities. Public Health Rep 2000; 115(2-3):191-7.[69]
HERE	HERE	Lee PT, Krause N. The impact of a worker health study on working conditions. J Public Health Policy 2002; 23(3):268-85.[185]
Housing Options	Housing Options	Stajduhar KI, Lindsey E. Home away from home: essential elements in developing housing options for people living with HIV/AIDS. AIDS Patient Care Stds. 1999; 13(8):481-91.[196]
James Bay	James Bay Cree Diabetes	Boston P, Jordan S, MacNamara E et al. Using participatory action research to understand the meanings aboriginal Canadians attribute to the rising incidence of diabetes. Chronic Dis Can. 1997; 18(1):5-12.[76]
Madison County	Madison County	Plaut T, Landis S, Trevor J. Enhancing Participatory Research with the Community Oriented Primary Care Model: A Case Study in Community Mobilization. Am Sociol 1992; 56-70.[197]
Native Hawaiian	The Native Hawaiian Smokers Survey	Tsark JA. A participatory research approach to address data needs in tobacco use among Native Hawaiians. Asian Am Pacific Islander J Health. 2001-2002; 9(1):40-8.[188]
PAR CHP	Participatory Action Research for Community Health	Rains JW, Ray DW. Participatory action research for community health promotion. Public Health Nurs 1995; 12(4):256-61.[198]
PAR Hmong	Participatory Action Research with Hmong Women	Yoshihama M, Carr ES. Community Participation Reconsidered: Feminist Participatory Action Research With Hmong Women. J Comm Pract 2002; 10(4):85-103.[219]

Table 4. Full and abbreviated titles and citations (continued)

Acronym	Full Study Name	Study References
Perspectives in Latina Women	Perspectives of Pregnant and Postpartum Latino Women on Diabetes, Physical Activity and Health	Kieffer EC, Willis SK, Arellano N, et al. Perspectives of pregnant and postpartum Latino women on diabetes, physical activity, and health. Health Educ Behav 2002; 29(5):542-56.[187]
Positively Fit	Positively Fit	Hiebert W, Swan D. Positively Fit: A Case Study in Community Development and the Role of Participatory Action Research. Comm Devel J 1999; 34(4): Oct, 356-64.[194]
Poultry Slaughterhouse	Poultry Slaughterhouse Study	Mergler D, Brabant C, Vezina N, et al. The weaker sex? Men in women's working conditions report similar health symptoms. J Occup Med 1987; 29(5):417-21.[183] Mergler D. Worker participation in occupational health research: theory and practice. Int J Health Serv 1987; 17(1):151-67.[184]
South Asian	South Asian Women	Choudhry UK, Jandu S, Mahal J, Singh R, Sohi Pabla H, Mutta B. Health promotion and participatory action research with South Asian women. J Nurs Scholarship 2002; 34(1):75-81.[220]
TAS	Together for Agricultural Safety Project	Flocks J, Clarke L, Albrecht S, et al. Implementing a community-based social marketing project to improve agricultural worker health. Environ Health Perspect 2001; 109 Suppl 3:461-8.[186]
Welcome Home	Welcome Home Ministries	Parsons ML, Warner-Robbins C. Formerly incarcerated women create healthy lives through participatory action research. Holistic Nurs Pract 2002; 16(2):40-9.[210] Parsons ML, Warner-Robbins C. Factors that support women's successful transition to the community following jail/prison. Health Care Women Int 2002; 23(1):6-18.[211]
WE ACT	West Harlem Environmental Action	Northridge ME, Yankura J, Kinney PL, et al. Diesel exhaust exposure among adolescents in Harlem: a community-driven study. Am J Public Health 1999; 89(7):998-1002.[214] Kinney PL, Aggarwal M, Northridge ME, et al. Airborne concentrations of PM(2.5) and diesel exhaust particles on Harlem sidewalks: a community-based pilot study. Environ Health Perspect 2000; 108(3):213-8.[213]

Table 5. Summary characteristics of Community-based Participatory Research studies

Characteristics	Number of Studies
Total number of studies identified	60
Average number of publications per study	2
Publication dates of the first article from the study	
Before 1980	1
1980-1985	0
1986-1990	2
1991-1995	8
1996-2000	25
2001 to 2003	24
Substantive topics	
General health concerns	11
Environmental hazards	9
Hypertension/heart disease/diabetes	8
Services for Human Immunodeficiency Virus (HIV)	6
Substance abuse including smoking	5
Cancer screening and prevention	4
Women’s health	4
Asthma prevention	2
Occupational health	2
Seniors’ health	2
Other miscellaneous concerns (disabilities, hospice access, childhood immunization, nutrition, mental health)	7
Study population or community defined by	
Ethnicity or race	24
Native American	*8*
African-American	*5*
Latino	*5*
Asian	*5*
Multiple ethnic groups	*1*
Health concern	18
Location	12
Occupation	6
Number of funding sources	
None listed	5
1	35
2	18
3 or more	2

Table 5. Summary characteristics of Community-based Participatory Research studies (continued)

Characteristics	Number of Studies
Type of funding sources (of all identifiable funding sources)	
Federal agencies	43
National Institute of Environmental Health Sciences	*11*
Centers for Disease Control and Prevention	*10*
National Cancer Institute	*3*
US Environment Protection Agency	*3*
National Institute on Alcohol Abuse and Alcoholism	*2*
Other agencies	*14*
Foundations or private sources	15
W.J. Kellogg Foundation	*3*
Robert Wood Johnson Foundation	*2*
Other foundations or private sources	*10*
State funding	11
Universities	6

Table 6. Completed interventions

Study Name and Citations	Study Design	Intervention	Key Results	Quality Rating for Research Elements/ Participatory Elements*
CMCA[113-118]	RCT	Community organizers worked with local public officials, agencies, media, and merchants to change community policies toward alcohol	Measures for access to alcohol and drinking behaviors generally declined after the intervention, although only 1 measure showed a statistically significant difference to the control group	2.65/2.45
East Baltimore[119-122]	RCT	Exit interview to increase understanding of disease and compliance with prescribed regimen; home visit to encourage a family member to provide support; invitations to small group sessions	Overall mortality and hypertension-specific mortality declined significantly in experimental groups; intervention shows a positive effect on appointment keeping, weight control, and blood pressure	2.74/2.45
Health is Gold![123]	RCT	Lay health worker activities: two 90-minute sessions with presentations and discussions at baseline, one session after 2 months	Preliminary findings: Percentage of women who had a Pap test increased significantly in the intervention group; knowledge about cervical cancer and Pap tests increased in both groups	2.61/2.60
Sierra Stanford[124,125]	RCT	Community-initiated workbook journal used as a support group alternative	No significant differences between groups in primary outcome measures; however, 74% of women felt emotionally supported	2.83/1.80
HIV Latina[126-130]	Quasi-experimental	Psycho-educational interventions prior to and 2 weeks after HIV antibody testing, including counseling, free condoms, skill development in condom use and cleaning needles, pregnancy counseling, referral, and advocacy	Participants in the intervention group made significant improvements in HIV knowledge and reported condom use, comparison group did not make significant pretest-posttest improvements in these measures	1.78/2.15

Table 6. Completed interventions (continued)

Study Name and Citations	Study Design	Intervention	Key Results	Quality Rating for Research Elements/ Participatory Elements*
Internet Access[131]	Quasi-experimental	Internet access via WebTV, training, technical support; access to a community specific health oriented Web page; placement of public Internet access in 10 community locations	Internet can positively influence health-related empowerment (six of eight items significantly different between intervention and control groups, compared to one item at baseline)	1.83/1.60
Korean Study[132-134,222]	Quasi-experimental	Educational materials and workshops in Korean about breast and cervical cancer screening; written material was also mailed to baseline survey participants	No significant differences in changes in screening between the intervention and the control group	2.43/2.55
Okanagan[135]	Quasi-experimental	A wide variety of activities and education measures based on community assessment of need, aimed at primary prevention, screening, and secondary prevention	Mixed results in changes of biological markers due to intervention effects	2.52/1.65
Wai'anae[136-138]	Quasi-experimental	Kokua Group, lay health educator-led group discussions to provide support and education for breast and cervical cancer screening; vouchers for free mammograms and Pap tests provided to patient and friend	Increased compliance with screening guidelines	2.39/3.00
NY Immunization[139]	One group pretest and posttest	Various outreach strategies to identify and enroll under-immunized children	Coverage rates for the basic antigens increased from 24% to 73% within recruited cohort	1.52/1.78
Stress and Wellness[141-143,223,224]	One group pretest and posttest	Daily newsletter, health awareness and screening programs, information display cases, feedback and recommendations to people on sources of stress, pilot project on quality improvement	Overall, social environment at work and employee well-being did not improve during the course of the study, however involvement in the project was associated with some improvements in decisionmaking, participation, coworker support and decreased symptoms for depression.	2.26/2.90

Table 6. Completed interventions (continued)

Study Name and Citations	Study Design	Intervention	Key Results	Quality Rating for Research Elements/ Participatory Elements*
Women and HIV Denial[144,145]	Nonexperimental, (data collected throughout period of intervention)	Individually tailored education based on interview contents, safer sex kits, and presentations at clubs and bars	20% of the women interviewed said that they had changed their behavior	1.52/1.95

* Range = 1 to 3; higher values represent better quality.

Table 7. Community-based Participatory Research studies with incomplete or not fully evaluated interventions

Study Name and Citations	Study Design	Intervention
CAAA[146-148]	Experimental: One group staggered randomized design	Community Environmental Specialists provide education and materials that relate to the reduction of asthma-triggers during home visits (minimum 12 visits)
PRAISE[149,150]	Experimental: RCT	Dietary cancer prevention intervention: 3 workshops on dietary cancer prevention; communication center; quarterly packets; tailored health bulletin; food festival; food events; inspirational booklet; skills assessment of the congregation
Seattle Homes Project[151]	Experimental: RCT	Outreach workers conduct home assessments and develop action plans; educational and social support
Seattle Vaccines[152]	Experimental: RCT	An educational brochure was mailed along with a postage-paid reply card to track immunization status; if response card not received, Senior Center volunteers made telephone contact using a script to encourage receipt of immunizations and to address specific barriers to immunization
TEAL[153]	Quasi-experimental	Only for Native Americans; 40 lay health advisors disseminate information through their social networks
ESVHWP[106,112,155-163]	Nonexperimental	30 lay health advisers (Village Health Workers) focused on increasing the problem-solving capacity of their community to reduce stressors or increase protective factors
Elderly in Need[92,154]	Nonexperimental	Individual interventions through public health nurses focusing on empowering the client and interventions on community levels to increase outreach to elderly residents
Haida Gwaii[77]	Nonexperimental	NR, except for two examples: a walking group and a group to gather traditional foods
Healthy Home[100,164,165]	Nonexperimental	Community education campaign to increase local residents' awareness of environmental health threats and protective techniques
Kahnawake[78,166-169]	Nonexperimental	Elementary school-based program to promote healthy lifestyle
La Vida[170]	Nonexperimental	Interventions were intended to build on local knowledge, details NR

Table 7. Community-based Participatory Research studies with incomplete or not fully evaluated interventions (continued)

Study Name and Citations	Study Design	Intervention
ME2[171]	Nonexperimental	Participatory educational and support program involving a workshop with 16 group sessions, home visits, and case management (support, resource referrals, information); expected outcome of the intervention not clearly stated
NRMNC[70]	Nonexperimental	Educational activities (workshops, presentations)
PACE[172,173]	Nonexperimental	Training package for pesticide safety; health promoter workshops
PINAH[174]	Nonexperimental	Health fairs; clean-up campaigns; teen pregnancy and drug awareness workshops
Preventing Arson[175]	Nonexperimental	Elimination of arson targets; deployment of public safety personnel; youth curfew; volunteer mobilization; activities for children and teenagers; media campaign
Survival Guide[176,177]	Nonexperimental	"Survival guide" for substance users to provide connections to treatment services
Women and Heart Disease[178]	Nonexperimental	Telephone communication network and monthly 2-hour group sessions

Table 8. Noninterventional Community-based Participatory Research studies

Study Name	Study Design	Research Objective
AABLH[179]	Observational	To build health promotion capacity among community residents through a community-based participatory model and to apply this model to study the nutritional environment of an urban area
Hospice Access[180]	Observational	To identify cultural and institutional barriers of African Americans toward hospices
Oregon Migrants[181,182]	Observational	To examine the degree of exposure to pesticides and potential health effects in migrant farmer workers and their children
Aboriginal[192,193]	Nonexperimental	To conduct a health assessment of older, urban, aboriginal women and support the grandmothers through health promotion programs
Bingham[195]	Nonexperimental	To identify community needs and work with residents in undertaking the solution
Chinese Elderly[199]	Nonexperimental	To assess whether older foreign-born Chinese Americans living in an urban ethnic enclave are at high risk of osteoporosis and to refer participants at high risk for followup care
CHEP[200-202]	Nonexperimental	To understand potential asthma triggers and home remedies and devise culturally relevant interventions
Controlling Pesticides[189]	Nonexperimental	To investigate how farm workers and those influential in farm worker safety shared common perspectives and how these perspectives could be used so groups could work together
Diabetes in East Harlem[190]	Nonexperimental	To survey East Harlem residents with diabetes to assess their knowledge, behaviors, barriers to care, and actions taken in response to barriers
Disability Community[191]	Nonexperimental	To uncover the attitudes of people with disabilities toward death with dignity/physician-assisted suicide legislation
EJS[215,216]	Nonexperimental	To quantify systematically the extent to which livestock operations and their potential impacts on health and quality of life disproportionately affected communities of low income and people of color
ECFA[203-208,225]	Nonexperimental	To identify the information necessary to design programs that reduce the risk of HIV transmission
EBFP[217]	Nonexperimental	To test the effect of the Blended Funding “system of care” on the functional status of children with mental illness, and to test the effects of the project on the ability of families and communities to care for these children
Glades[212]	Nonexperimental	To assess population-based rates of TB and HIV infection in the Glades community

Table 8. Noninterventional Community-based Participatory Research studies (continued)

Study Name	Study Design	Research Objective
Harlem Birth Right[209]	Nonexperimental	To identify the social, economic, and political variables that may lead to high rates of infant mortality and adverse pregnancy outcomes among African American women
Healthy Neighborhoods[69,218]	Nonexperimental	To increase the general health of the community through neighborhood health advocates and action teams
HERE[185]	Nonexperimental	To determine the workload, physical strain, relationship with management, and worker disability of hotel room cleaning personnel
Housing Options[196]	Nonexperimental	To determine the need for supported living homes for people with HIV/AIDS
James Bay[76]	Nonexperimental	To explore how diabetes is understood by Cree with diabetes, their families, and friends
Madison County[197]	Nonexperimental	To assess residents' concerns about health, health needs, and access to health care in Madison County, NC
Native Hawaiian[188]	Nonexperimental	To understand smoking-related habits, attitudes, concerns, and health problems of Native Hawaiians
PAR CH[198]	Nonexperimental	To conduct a health survey to obtain baseline data on health behaviors
PAR Hmong[219]	Nonexperimental	To plan, develop, and implement a project that allowed Hmong women to share their concerns and work on strategies to address them
Perspectives of Latinas[187]	Nonexperimental	To assess perceptions and attitudes on diabetes risk and impact, physical activity, and factors influencing the participation in physical activity during and after pregnancy
Positively Fit[194]	Nonexperimental	To define appropriate rehabilitation goals for PWAs (people living with AIDS)
Poultry Slaughterhouse[183,184]	Nonexperimental	To characterize the work situation, to identify health problems and their prevalence separately for men and women; to explore associations between health problems and working conditions
South Asian[220]	Nonexperimental	To examine South Asian immigrant women's health promotion issues; to facilitate the creation of emancipatory knowledge and self-understanding; to promote health education and mobilization for culturally relevant action
TAS[186]	Nonexperimental	To assist agricultural worker communities in creating effective solutions to the problem of pesticide exposure
Welcome Home[210,211]	Nonexperimental	To describe factors that support women's successful transition to the community following jail; to continue to develop Welcome Home Ministries as a health-promoting organization

Table 8. Noninterventional Community-based Participatory Research studies (continued)

Study Name	Study Design	Research Objective
WE ACT[213,214]	Nonexperimental	To generate pilot data on temporal and spatial variations in sidewalk concentrations of contaminants at street level and to relate these data to measures of diesel emissions on adjacent streets; to collect data on the levels of diesel exhaust exposure and lung function among Harlem youth

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Table 9. Evidence of community involvement in research* [*Read across for full entry*]

Study Name and Citations	Select Research Question	Develop Proposal	Have Financial Responsibility	Design Study	Recruit and Retain Subjects
Completed Intervention					
CMCA[113-118]					Yes
East Baltimore[119-122]	Yes				Yes
Health is Gold![123]	Yes	Yes	Yes	Yes	Yes
Sierra Stanford[124,125]	Yes				Yes
HIV Latina[126-130]	Yes			Yes	Yes
Internet Access: A Community-Based Health Initiative[131]				Yes	Yes
Korean Study[132-134,222]	Yes			Yes	Yes
Okanagan[135]				Yes	Yes
Wai'anae[136-138]	Yes	Yes	Yes	Yes	Yes
NY Immunization[139]			Yes		Yes
Stress and Wellness[141-143,223,224]	Yes		Yes	Yes	Yes
Women and HIV Denial[144,145]	Yes		Yes		Yes
Incomplete Interventions or Interventions Not Yet Fully Evaluated					
CAAA[146-148]	Yes	Yes		Yes	Yes
PRAISE[149,150]				Yes	Yes
Seattle Homes Project[151]					Yes
Seattle Vaccines[152]				Yes	Yes
TEAL[153]					Yes
ESVHWP[106,112,155-163]				Yes	Yes
Elderly in Need[92,154]					Yes
Haida Gwaii[77]	Yes		Yes		
Healthy Home[100,164,165]	Yes				Yes
Kahnawake[78,166-169]	Yes	Yes	Yes	Yes	Yes
La Vida[170]	Yes				Yes
ME2[171]					Yes
NRMNC[70]	Yes	Yes	Yes		Yes
PACE[172,173]	Yes	Yes	Yes	Yes	Yes
PINAH[174]				Yes	Yes

*** Entries are based on information reported in at least one citation for the study in question.**

Table 9. Evidence of community involvement in research (continued)

Participate in Measurement Instruments and Data Collection	Develop, Implement Intervention	Interpret Findings	Disseminate Findings	Apply Findings	Number of Elements of Community Involvement Reported
Yes	Yes	Yes	Yes	Yes	6
Yes	Yes	Yes		Yes	6
	Yes	Yes	Yes	Yes	9
Yes	Yes		Yes		5
Yes	Yes	Yes	Yes		7
	Yes				3
Yes	Yes	Yes	Yes	Yes	8
Yes	Yes		Yes		5
Yes	Yes	Yes	Yes	Yes	10
Yes	Yes				4
Yes	Yes	Yes	Yes	Yes	9
Yes	Yes	Yes			6
Yes	Yes	Yes	Yes		8
Yes	Yes				4
Yes					2
	Yes				3
Yes	Yes	Yes	Yes	Yes	6
Yes	Yes	Yes	Yes	Yes	7
	Yes				2
Yes	Yes		Yes		5
Yes	Yes			Yes	5
Yes	Yes	Yes	Yes	Yes	10
Yes			Yes		4
Yes	Yes	Yes	Yes		5
Yes	Yes	Yes	Yes	Yes	9
Yes	Yes	Yes	Yes		9
Yes	Yes	Yes	Yes		6

Table 9. Evidence of community involvement in research (continued) [*Read across for full entry*]

Study Name and Citations	Select Research Question	Develop Proposal	Have Financial Responsibility	Design Study	Recruit and Retain Subjects
Preventing Arson[175]					
Survival Guide[176,177]	Yes				Yes
Women and Heart Disease[178]					
Studies Without Planned/Evaluated Interventions					
AABLH[179]	Yes	Yes		Yes	Yes
Hospice Access[180]					
Oregon Migrants[181,182]			Yes		Yes
Aboriginal[192,193]					
Bingham[195]					Yes
Chinese Elderly[199]					Yes
CHEP[200-202]	Yes	Yes	Yes	Yes	Yes
Controlling Pesticides[189]					Yes
Diabetes in East Harlem[190]	Yes	Yes		Yes	Yes
Disability Community[191]	Yes	Yes	Yes	Yes	Yes
EJS[215,216]	Yes			Yes	Yes
ECFA[203-208,225]				Yes	Yes
EBFP[217]	Yes		Yes	Yes	Yes
Glades[212]			Yes		
The Harlem Birth Right Project[209]				Yes	Yes
Healthy Neighborhoods[69,218]					Yes
HERE[185]	Yes	Yes	Yes	Yes	Yes
Housing options[196]				Yes	Yes
James Bay[76]	Yes		Yes		Yes
Madison County[197]				Yes	Yes
Native Hawaiian[188]				Yes	Yes
PAR CH[198]	Yes	Yes		Yes	Yes
PAR Hmong[219]	Yes				Yes
Perspectives of Latinas[187]					
Positively Fit[194]			Yes		Yes
Poultry Slaughterhouse[183,184]				Yes	Yes

Table 9. Evidence of community involvement in research (continued)

Participate in Measurement Instruments and Data Collection	Develop, Implement Intervention	Interpret Findings	Disseminate Findings	Apply Findings	Number of Elements of Community Involvement Reported
	Yes				1
Yes	Yes			Yes	5
Yes	Yes	Yes	Yes		4
		Yes	Yes		6
Yes			Yes		2
Yes			Yes	Yes	5
Yes		Yes	Yes		3
Yes			Yes	Yes	4
Yes					2
Yes	Yes	Yes	Yes	Yes	10
Yes		Yes			3
Yes		Yes	Yes	Yes	8
Yes	Yes	Yes	Yes		9
Yes		Yes	Yes	Yes	7
Yes		Yes	Yes	Yes	6
Yes					5
				Yes	2
Yes	Yes	Yes	Yes		6
Yes	Yes	Yes	Yes	Yes	6
Yes	Yes	Yes	Yes	Yes	10
Yes		Yes	Yes		5
Yes		Yes	Yes	Yes	7
Yes			Yes	Yes	5
Yes	Yes	Yes	Yes	Yes	7
Yes		Yes		Yes	7
	Yes				3
		Yes		Yes	2
Yes	Yes	Yes			5
Yes		Yes	Yes	Yes	6

Table 9. Evidence of community involvement in research (continued) [*Read across for full entry*]

Study Name and Citations	Select Research Question	Develop Proposal	Have Financial Responsibility	Design Study	Recruit and Retain Subjects
South Asian[220]			Yes		
TAS[186]	Yes	Yes			Yes
Welcome Home[210,211]					
WE ACT[213,214]	Yes	Yes	Yes		
Total	28	14	19	28	50

Table 9. Evidence of community involvement in research (continued)

Participate in Measurement Instruments and Data Collection	Develop, Implement Intervention	Interpret Findings	Disseminate Findings	Apply Findings	Number of Elements of Community Involvement Reported
Yes	Yes	Yes	Yes	Yes	6
Yes		Yes	Yes		6
	Yes	Yes	Yes		3
Yes		Yes	Yes		6
50	38	39	41	28	

Chapter 4. Discussion

Defining Community-based Participatory Research

As described in Chapter 3, to address Key Question 1 of this systematic review, we scrutinized 55 articles in depth to gain a comprehensive view of the nature, principles, and practical aspects of community-based participatory research (CBPR). We compared and contrasted this material in terms of seven main steps and stages of CBPR, as set against issues of the essential elements and best practices for the conduct of CBPR. From this analysis, we arrived at a workable definition of CBPR that guided our work and that, we believe, can serve the purposes of the Agency for Healthcare Research and Quality (AHRQ), sponsor of this evidence report, other Federal agencies that extensively support CBPR, and other interested parties and agencies.

Specifically, we propose that CBPR is a collaborative research approach that is designed to ensure and establish structures for participation by communities affected by the issue being studied, representatives of organizations, and researchers in all aspects of the research process to improve health and well-being through taking action, including social change. This is a deliberately short definition that, by itself, does not completely convey the critical philosophical or practical aspects of successful CBPR. Thus, we suggested that the concept should be extended to emphasize three main ideas. First, CBPR is about "co-learning" by both researchers and community collaborators and "mutual transfer" of expertise and insights into the issues of concern and, within those, the issues that can be studied with CBPR methods. Second, it is about "sharing in decisionmaking." Finally, CBPR is about "mutual ownership" of the processes and products of the research enterprise.

A significant implication of this definition is the need to understand the intended outcomes of CBPR activities. The goal is improving the health and well-being of members of the community, however defined for a given research project, by means of taking actions that bring about intended change and minimize unintended negative consequences of such change.

Implementing CBPR

Quality of Research Methodology

An inherent challenge faced by anyone trying to evaluate the quality and impact of CBPR methodology is the fact that being true to the methods makes it nearly impossible to compare CBPR rigorously to research carried out with more traditional research methods. The problem begins early in the process in that the purest form of CBPR requires that the community identify the health problem to be addressed. One could not readily compare the process and outcome of a study for which the community chooses diabetes as a research focus and the researchers choose HIV/AIDS.

Although in theory one could preselect a study outcome and measure and then conduct a two-arm trial randomizing half the participants to a CBPR approach and half to traditional research methodologies, the two approaches would almost certainly yield different sets of measures, interventions, and recruitment and retentions strategies, leaving very little for comparison other than the final outcome measure. One would be left wondering whether the outcomes achieved were potentially biased by different factors in each study that could be the result of the research method used, such as interviews conducted by individuals hired from the community in the CBPR arm as compared to interviews done by graduate students in the traditional arm.

In the absence of randomized trials comparing CBPR with non-CBPR approaches, we are left with trying to draw conclusions from what investigators report in published journal articles. We have found that publication of intervention research (conducted by either CBPR or traditional methods) is associated with significant challenges related to page limitations of journals. Authors of such studies must often publish their findings and study methodology in separate pieces. This problem is further compounded for CBPR work; researchers must report years of partnership development and collaboration in very few words and in a small number of journals willing to accept this more descriptive science. As a result, we found that articles lacked information about the implementation of CBPR, from both the community participation and the research perspectives.

In our review, we were careful to assess research quality based on factors such as internal and external validity rather than a strict adherence to traditional study designs. For example, rather than specifying that a randomized controlled trial (RCT) is the highest quality study design, we assessed the degree to which the study sample was representative of the larger population to which generalizations would be made, whether intervention and comparison groups were comparable, the quality of the measures, and loss to followup. Study designs that included a delayed intervention control group intended to provide benefit to those randomized to the control condition were rated as very high-quality studies. Similarly, studies that gave thoughtful attention to the identification of a nonrandomized comparison that preserved internal validity while responding to community concerns were also given high marks.

To date, a limited number of CBPR studies have been published that represent a complete and fully evaluated intervention or an observational/epidemiologic study that can be generalized beyond the participants involved in an intervention study (baseline data). Recent special issues for journals focusing on CBPR have reported on studies with high-quality research methods, as with the July 2003 issue of the *Journal of General Internal Medicine*. Other journals (including the *American Journal of Public Health* and the *Journal of Interprofessional Care*) have issued similar calls for CBPR articles, but these occurred after our evidence review period. Much of the research reported in these special issues was generated as a result of studies funded through the Centers for Disease Control and Prevention (CDC), the National Institute for Environmental Health Sciences (NIEHS), and several foundations. As funding agencies and high-quality peer-reviewed journals begin to recognize the legitimacy and potential value of CBPR, these steps offer further encouragement to researchers combining both excellent research methods and adherence to the principles of CBPR.

Although the potential for trade-offs between addressing community concerns about research and maintaining high-quality study designs has been cited as a possible challenge to high-quality research,[2,58] our review does not suggest a strong trend in the direction of solid community-based participatory methods combined with weak research design or measurement (Table 6). Similarly, the strongest research methods do not appear to be combined with weaker community participation elements. Again, owing at least in part to page limitations in those journals publishing rigorous experimental research, researchers tend not to describe fully their research methodology, adherence to CBPR principles, and the degree to which the collaboration may have benefited or threatened the research quality. Future CBPR researchers should consider identifying creative approaches to condensing this information in tabular format or making it available on the Web.

Most of the studies we reviewed were nonexperimental in design; only a limited number included any sort of intervention. When multiple papers were published about a single study, we combined the information in a single table row of our evidence tables and treated the data as a single unit. We did not inflate the relative number of nonexperimental studies by the spread of content across several articles. Many papers described the partnership development process and reported on formative data related to their processes and assessments of community concerns. In our view, many of the nonexperimental studies had been funded with small grants to develop partnerships around an identified health issue that did not provide sufficient resources to conduct an intervention or rigorous evaluation.

We also speculate that few larger intervention and/or experimental trials were funded in the past because review panels were not receptive to a CBPR approach. To the traditional researcher, asking study “subjects” to identify the focus of research, help design the intervention, and provide feedback on measurement instruments and data analysis might be viewed as scientific heresy. At the same time, researchers skilled in community collaboration may or may not be equally skilled in using rigorous research methodology and thus able to convince reviewers of the strength of the complete CBPR approach.

Additional possible explanations for the relative lack of completed evaluations of CBPR interventions is the “lack of fit” between the dynamics of true community collaborations and the peer-review funding approach to setting research priorities, maintaining timelines, and exercising budgetary control. Partnership development between communities and researchers takes time; if such work is to be truly community-guided, then it requires a different way of thinking about choosing research topics and allocating funding.

CDC and the National Institutes of Health (NIH) are major sources of health-related funding. Both agencies are divided into institutes and centers primarily related to specific disease entities, such as diabetes, cardiovascular disease, and HIV/AIDS. For the most part, these agency divisions generate funding opportunities and review proposals. This results in what is sometimes referred to as “categorical funding,” which ultimately leads to putting researchers in the position of choosing a health issue and then looking around for a community where this topic can be studied. With the exception of some foundations, such as the W.K. Kellogg Foundation with the Community-based Public Health Initiative, and Federal agencies, such as the CDC with the Urban Research Center Initiative and more recently the CBPR initiative, few funding opportunities allow the flexibility of research partners selecting the focus of their research based on concerns identified within the community.

Length of funding is also an issue. In true CBPR, by the time the partnership has formed and the health outcome is identified, time in the funding cycle (usually a maximum of 5 years) is generally inadequate to implement and complete a well-developed intervention and rigorous evaluation. Several solutions have been proposed. Israel and colleagues recommend the use of planning grants to facilitate partnership development and identification of the research focus.[226] The planning grant could be a “stand-alone” funding option or linked to a larger followup funding opportunity. The CDC REACH (Racial and Ethnic Approaches to Community Health) Initiative, for example, makes followup funding for longer-term work contingent on successful partnership development and issue identification. The CDC’s Community-based Participatory Prevention Research effort requires the community-university research collaborative to demonstrate an existing track record before applying. This approach rewards researchers who choose to become involved in community collaborations before the potential for funding becomes an incentive.

Finally, budgetary restrictions may inhibit the generation of high-quality CBPR. Perhaps more important than the total amount is flexibility in budget management and expenditures. As communities receive an increasing number of requests to participate in research projects, often receiving little direct benefit in return (such as an epidemiologic study where risks are identified but no intervention is delivered in return), they are understandably demanding more involvement regarding the decisions about expenditures. For example, funds could be used to hire graduate students to conduct telephone surveys or to hire and train community members who are currently unemployed, thus infusing funds directly into the community while building capacity among community members. Budgetary restrictions (such as no overhead dollars to be spent on food) that may be an irritation to academics can have more serious consequences for research in the community, where food is considered an essential component of social interaction and serves as an incentive or an acknowledgment for research participation. Indirect expenses, in general, represent a disparity between universities and the communities, where the academic institution receives substantial overhead, but few indirect costs of the community organization are covered.

Level of Community Involvement

In our review, community involvement extended through all areas of research, although the extent of involvement varied by the stage of the research. The strongest involvement was in recruitment of study participants, design and implementation of the intervention, and interpretation of findings. Many authors argued that community involvement, especially in these areas, led to greater participation rates, increased external validity, decreased loss to followup, and increased individual and community capacity.

Disadvantages to such methods were not frequently reported. They may include some loss of internal validity, often through introduction of selection bias (recruitment), and lack or sometimes even loss of randomization if contamination occurs as community members become more knowledgeable and share intervention strategies with control or comparison groups. Disadvantages may also inclue highly motivated intervention groups not representative of the broader population and possible biased interpretations of findings.

In many cases, distinguishing between advantages or disadvantages associated with CBPR can be difficult. For example, on the whole, community mobilization can yield high and sustained attendance rates at intervention group sessions but also produce some “spillover effect” in the control group. Whether this is, on balance, a good or bad thing for the research process is open to debate.

Our review suggests that hypothesis generation and proposal development remained mainly in the hands of researchers. Most studies involved some form of community advisory boards that worked closely with the researchers in setting priorities, developing interventions, and assuring a culturally appropriate approach. Only a few, however, involved a steering committee or decisionmaking board that actually took an active lead role.

If this leadership pattern could be attributed to the community's lack of decisionmaking power and experience or lack of ownership of the research, the publications we reviewed did not make it clear. Some articles addressed the persistent challenge for researchers to maintain scientific validity and to share ownership with community groups and address participant interests. In one diet and cancer study (PRAISE!), researchers scrambled to create a non-nutrition intervention for the delayed intervention control group when it appeared that this group was so enthused about the project that they intended to create and implement their own nutrition intervention early in the project. Other researchers reported mid-course adjustments in the intervention or measurement approach based on input from the community.

Some studies reported that application of findings influenced policy changes that led to a sustainable improvement for the community. Others received further funding that was obtained by the community. Apart from these obvious successes, some studies suggested that empowerment of the community was a positive result of participation in the research.

Achieving Intended Outcomes

Improving Research Quality

To achieve the highest research quality, researchers must select the strongest possible study design, measurement approach, data collection plan, and analysis strategy to address their specific research question or specific aims. If community input suggests that an RCT to test a diabetes intervention would be unacceptable because the control group would receive no benefits, it is incumbent on the researcher to work with the community to select and justify the strongest possible alternative design, such as a delayed intervention control. The research partner must present arguments in the proposal that identify the potential costs and benefits of a variety of different approaches from both the research and community perspectives.

In addition, researchers must give community members credit for the ability to understand complex research challenges if they present the issues clearly and thoughtfully. One of the many benefits of involving community members as research partners is that they begin to see the long-term gains associated with research — for example, improved intervention approaches, increased potential for funding and dissemination, "ammunition" to advocate for effective policy changes — even as they come to understand the relatively short-term bother of the data collection activities themselves (e.g., blood draws, long surveys). This can have a positive effect on the immediate study and on the potential for study participants to become involved with future research efforts.

Given the substantial number of good-quality but incomplete CBPR intervention studies we identified, an increasing number of initiatives to fund CBPR work, and journal editors giving special attention to this research, the number of high-quality CBPR publications is likely to rise significantly in the next few years.

Improving Community Capacity

Authors of the studies we reviewed here rarely brought up enhanced community capacity as an explicit goal of a CBPR project. Rather, they mentioned it in descriptions of the collaborative process and clearly considered it to be a critical component. Studies were much more likely to report capacity building on the part of the community rather than on the part of the researchers or their institutions.

In our review of the definitional literature, however, development of the capacity of individual investigators and research institutions to interact more collaboratively with the community on research issues is a significant expectation of CBPR. Researchers, who are the traditionally designated “experts” in conventional academic-community partnerships, may find it hard to view themselves as learning from their community partners. When published studies results discuss capacity building on the part of the researchers, we may rightly conclude that such learning has taken place.

Improving Health Outcomes

Among the limited number of fully evaluated complete interventions that we located for our review, the stronger or more consistent positive health outcomes were generally found in the higher-quality research designs. This could serve as an incentive to CBPR research partnerships to pay adequate attention to the “R” component of CBPR.

Given the long-term nature of true CBPR efforts, one could argue that the potential scope of related health outcomes cannot be realized from one 5-year study focused on a specific chronic illness. If a CBPR effort successfully builds individual and community capacity, future benefits may include improved lifestyle habits, increased institutional responsiveness to workers’ health concerns, or changes in policy that facilitate a healthier environment. Associated positive health outcomes might have nothing to do with those initially targeted by the study. None of the studies we reviewed could have captured such long-term and indirect potential benefits of CBPR.

Planning Future Research

Criteria and Processes for Reviewing CBPR Proposals

Although our review focused on published CBPR papers rather than grant proposals, it provided some insight into the quality of research that has been funded. We were somewhat surprised by the limited number of high-quality completed intervention and observational studies identified in our review. Because we included only completed interventions and epidemiologic studies in our quality rating system, we may have missed some high-quality research projects focused on formative data collection or cross-sectional survey findings that did not meet these criteria.

We have discussed some potential reasons for the limited number of high-quality published studies describing completed interventions. They included unfamiliarity with CBPR principles or skepticism about involving research participants in the research enterprise, challenges of developing a research partnership and completing a study within the traditional funding frameworks, and a focus of many reports on the development of research partnerships rather than outcomes. As described in the next section, we have reason to believe that this number of completed projects will grow in the near future because of several initiatives promoting the funding and publication of CBPR.

With the abundance of interest in funding CBPR efforts, understanding what we have learned to this point and how this can be applied to improving this field of research in the future is critical. Guidelines for applicants and reviewers are also essential, as are recommendations for funding agencies interested in supporting this type of work. Indeed, our review suggests that the stronger studies were somewhat more likely to be funded by Federal agencies with more stringent review processes than, for example, State or community-level organizations.

If we are to continue in our efforts to understand the quality and impact of CBPR, funders must structure their Requests for Applications (RFAs) to elicit responsive applications adhering to CBPR principles, and reviewers must be adequately familiar with the nuances and potential added value of CBPR to identify proposals with the greatest potential to move this field forward. Exhibits 1 through 3 (in Appendix E[*]) offer guidelines to support this effort.

Challenges of the Literature Review

As with many systematic efforts to review the literature, this one was hampered by our inability to initially narrow the scope of the literature using existing Medical Subject Headings (MeSH) terms or key words. MEDLINE® searches for CBPR articles are particularly challenging because the literature is newly emerging and the MeSH indexing is not yet adequate for the task. We considered many terms while constructing our searches (Table 10). Terms with asterisks occur frequently in the relevant citations and CBPR literature, and terms in quotes are key words, not MeSH terms.

Searching MEDLINE® and combining these three concepts yielded more than 1,300 citations. These multiple searches yielded numerous articles of varying relevance; moreover, formal MEDLINE® searches did not always identify highly relevant articles. When we probed, we could find no consistent coding. Thus, we supplemented these searches with citation searches in previously identified articles and with recommendations from experts in the field.

As CBPR becomes better recognized and understood, the MeSH indexing should become more sensitive. We recommend building a uniform set of MeSH headings to describe CBPR and encouraging journal editors to suggest the use of these terms as appropriate.

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[*] **Note:** Appendixes and Evidence Tables cited in this report are provided electronically at http://www.ahrq.gov/clinic/epcindex.htm

Future Growth of CBPR

Based on several developments in CBPR research uncovered in our review, we believe that the number of high-quality CBPR studies published is likely to increase substantially in the near term. First, NIEHS continues to fund proposals emphasizing CBPR and environmental justice. Second, NIEHS hosted a conference in 2000 on successful models of CBPR to "expand the acceptance, use, and applicability of CBPR as a valuable tool in improving the public health of the nation" (p. 1), followed by a report titled *Successful Models of Community-Based Participatory Research.*"[227] Third, AHRQ convened a CBPR planning conference in 2001; AHRQ also initiated the EXCEDE program—90 national leaders interested in advancing CBPR. Fourth, the Journ*al of General Internal Medicine* published a special issue on CBPR in 2003 (funded by AHRQ), as did the *American Journal of Public Health*, also in 2003. Finally, the *Journal of Interprofessional Care* will sponsor a CBPR theme issue in 2004. Fifth, the CDC, through the Urban Research Centers and the Prevention Research Centers, continues to fund this type of research. Sixth, the W.K. Kellogg Foundation has increased support to train Community Health Scholars, with an emphasis on CBPR methods. Seventh, a CDC initiative (totalling $13 million) seeks to support "multi-disciplinary, multi-level, participatory research that will enhance the capacity of communities and population groups to address health promotion and the prevention of disease, disability, and injury"; 26 proposals for 3-year projects have been funded. Eighth, formation of a Federal interagency workgroup for CBPR[60] will strengthen communication among Federal agencies with an interest in supporting CBPR processes.[228] Ninth, an Environmental Health Perspectives' Supplement, "Advancing Environmental Justice Through Community-Based Participatory Research.[229] Finally, a report by the Community-Campus Partnership for Health, "Developing and Sustaining Community-University Partnerships for Health Research: Infrastructure Requirements."[230]

Given the predicted increase in high-quality CBPR publications in the near future, we recommend that AHRQ or another agency committee sponsor an updated evidence review of CBPR within a few years to assess the development of this field and to refine, insofar as necessary, our proposed guidelines for proposal development and review.

Environmental and Policy Change

In many areas of health promotion and disease prevention, researchers and community activists alike are beginning to focus their efforts further "upstream" on the socioecologic model, which means placing a greater emphasis on policy and environmental change that facilitate health-promoting choices at the individual level. The belief is that individuals currently facing a "toxic environment" related to air quality, availability of healthy foods, opportunities for physical activity, and ease of access to alcohol and cigarettes may be better served by community-level change than by intensive efforts aimed at individual behavior change.

CBPR fits well with this trend toward "upstream" approaches to health promotion through its ability to mobilize community action. Although some approaches to environmental and policy changes require State or national legislative decisions, many other environmental enhancements can occur through micro-level policy change within the community or workplace. For example, some CBPR efforts were able to identify workplace health and safety issues of great concern to the workers, form working groups, and begin to address some of the issues (the Stress and Wellness and Poultry Slaughterhouse projects illustrate these steps; see Table 8 in Chapter 3 for the full set of references). Better funding for this research effort might have allowed for a stronger study design able to demonstrate effectiveness.

Conventional and CBPR researchers alike face many challenges in the area of study design and measurement as we move our research upstream. However, CBPR approaches to community collaborations are well positioned to engage communities and achieve the desired changes. Seeking the best possible balance between research methodology and community collaboration is critical to move the field forward.

Improving the Quality of CBPR Reports

New guidelines from international groups provide clear instructions on how randomized controlled trials (CONSORT) and observational studies (MOOSE) should be reported.[231,232] Systematic reviews such as this one are frequently hampered by the lack of standardization in the peer-reviewed literature, leading to many studies being left out or an inability to draw useful conclusions about a particular field of research. If studies are incompletely or inaccurately documented, their quality rating is likely to be downgraded (fairly or not).[233,234]

Just as we have proposed guidelines for the CBPR proposal writing and peer review (study section) process, perhaps recommendations are needed for improving the quality of reports for CBPR studies. O'Toole, in the *Journal of General Internal Medicine* special issue on CBPR, suggested the need for a "common language" regarding CBPR and describes a potential process for CBPR findings in the health sciences literature; he articulates this approach as "research-plus" that is methodologically rigorous while maintaining important contributions to the relevance and translation of research.[235]

Publication guidelines, like those for proposal review should reflect the increasing rigor required of authors in the evidence-based practice field while recognizing the unique situation facing researchers who are balancing research rigor with commitment to community collaboration. For CBPR to gain more credibility and receive more research dollars, researchers and community members must hold themselves to the highest possible standards on both sides of this issue.

Support for CBPR from the Community of Scholars

If CBPR is to achieve its full potential as a research process or methodology uniquely designed to address some of the most challenging health care issues of our time, full support is required from the "community of scholars," located in neighborhoods as well as universities. Funding agencies must understand the full benefits and complexities of CBPR to generate RFAs that elicit high-quality proposals incorporating the essential research and participatory elements of this approach. Communities must take the risk to become full partners in the research enterprise, contributing their unique knowledge and experience while safeguarding their interests. Reseachers must combine excellent science with compassionate and respectful community partnerships; journals must create opportunities to highlight and disseminate CBPR research products; and health care providers and policymakers must be guided by the evidence that results from the collaborative efforts. Enhancing any one component of this cycle is likely to have a positive effect on the others, ultimately strengthening and sustaining community-based participatory research.

Table 10. Indexing CBPR studies: core terms

I. CBPR concept	**II. Research process terms**	**III. Research population terms**
"community based participatory research" "community based research" "community driven research" "CBPR" *Community Health Services *Community-Institutional Relations OR Interinstitutional Relations *Community Health Planning *Community Networks *Community Health Centers *Consumer Participation *Public Health Community Health Aides Community Medicine Voluntary Workers "lay health advisors" OR LHA "coalition building"	*Health Services Research Research *Process Assessment, Health Care *Outcome and Process Assessment, Health Care *Program Evaluation *Data Collection *Program Development Health Surveys Health Promotion Health Behavior Health Education	*Medically Underserved Area *Minority Groups Ethnic Groups *Disabled persons *Socioeconomic factors;, includes: Career Mobility Educational Status Employment Family Characteristics Income Medical Indigency Occupations Poverty Social Change Social Class Social Conditions Population; includes: Rural, suburban and urban

References and Included Studies

1. Institute of Medicine, Committee for the Study of the Future of Public Health, Division of Health Care Services. The Future of Public Health. Washington, D.C.: National Academy Press, 1988.

2. Green LW, Mercer SL. Can public health researchers and agencies reconcile the push from funding bodies and the pull from communities? Am J Public Health 2001; 91(12):1926-9.

3. Olden K, Guthrie J, Newton S. A bold new direction for environmental health research. Am J Public Health 2001; 91(12):1964-7.

4. O'Neill EH. Health Professions education in the Future: Schools in Service to the Nation. San Francisco, Ca: Pew Health Professions Commission, 1993.

5. Cassel JC. The contribution of social environment to host resistance. Am J Epidemiol 1976; 104:107-23.

6. Satel S. The indoctrinologists are coming. Atlantic Monthly 2001; 59-64.

7. Kaplan CD. What works in drug abuse epidemiology in Europe. J Addict Dis 1991; 11(1):47-59.

8. Berg A. Sliding toward nutrition malpractice: time to reconsider and redeploy. Am J Clin Nutr 1993; 57(1):3-7.

9. Mittelmark MB, Hunt MK, Heath GW, et al. Realistic outcomes: lessons from community-based research and demonstration programs for the prevention of cardiovascular diseases. J Public Health Policy 1993; 14(4):437-62.

10. Aguirre-Molina M, Gorman DM. Community-based approaches for the prevention of alcohol, tobacco, and other drug use. Annu Rev Public Health 1996; 17:337-58.

11. Israel BA, Schulz AJ, Parker EA, et al. Review of community-based research: assessing partnership approaches to improve public health. Annu Rev Public Health 1998; 19:173-202.

12. Davis SM, Reid R. Practicing participatory research in American Indian communities. Am J Clin Nutr 1999; 69(4 Suppl):755S-9S.

13. Rappaport J. Research methods and the empowerment social agenda. In: Tolan P, Keys C, Chertok F, Jason L, eds. Research Community Psychology: Issues of Theory and Methods. Washington, DC: American Psychological Association, 1990.

14. Gamble VN. Under the shadow of Tuskegee: African Americans and health care. Am J Public Health 1997; 87(11):1773-8.

15. Corbie-Smith G, Thomas SB, Williams MV, et al. Attitudes and beliefs of African Americans toward participation in medical research. J Gen Intern Med 1999; 14(9):537-46.

16. Thomas SB, Quinn SC. The Tuskegee Syphilis Study, 1932 to 1972: implications for HIV education and AIDS risk education programs in the black community. Am J Public Health 1991; 81(11):1498-505.

17. Hatch J, Moss N, Saran A, et al. Community research: partnership in black communities. Am J Prev Med 1993; 9(6 Suppl):27-31; discussion 32-4.

18. Wallerstein N, Bernstein E. Introduction to community empowerment, participatory education, and health. Health Educ Q 1994; 21(2):141-8.

19. Goodman RM, Speers MA, McLeroy K, et al. Identifying and defining the dimensions of community capacity to provide a basis for measurement. Health Educ Behav 1998; 25(3):258-78.

20. Cornwall A, Jewkes R. What is participatory research? Soc Sci Med 1995; 41(12):1667-76.

21. Green LW, George MA, Daniel M *et al*. Study of Participatory Research in Health Promotion:

Review and Recommendations for the Development of Participatory Research in Health Promotion in Canada. Ottawa, Canada: The Royal Society of Canada, 1995; ISBN-0-920064-55-8.

22. Green LW, George MA, Daniel M, et al. Background on participatory research. In: Murphy D, Scammell M, Sclove R, eds. Doing Community-Based Research: A Reader. Amherst, MA: Loka Institute, 1997: 53-66.

23. George MA, Daniel M, Green LW. Apprasing and funding participatory research in health promotion. Int Q Comm Health Educ 1998; 18:181-97.

24. Steckler A, Dodds J. Changing promotion and tenure guidelines to include practice: one public health school's experience. J Public Health Manag Pract 1998; 4(4):114-9.

25. Schon DA. Knowing in action: The new scholarship requires a new epistemology. Change 1995; 27-34.

26. Seifer SD. Service-learning: community-campus partnerships for health professions education. Acad Med 1998; 73(3):273-7.

27. Stevens RH. Public health practice in schools of public health: is there a fit? J Public Health Manag Pract 2000; 6(1):32-7.

28. Association of Schools of Public Health. Demonstrating Excellence in Academic Public Health Practice. Washington DC: Association of Schools of Public Health, 1999.

29. Stoecker R. Are academics irrelevant? Roles for scholars in participatory research. Am Behav Sci 1999; 42:840-54.

30. Brown LD, Tandon R. Ideology and political economy in inquiry: Action research and participatory research. J Appl Behav Sci 1983; 19:277-94.

31. Schensul SL. Science, theory and application in anthropology. Am Behav Scient 1985; 29:164-85.

32. Israel BA, Schurman SJ, House JS. Action research on occupational stress: involving workers as researchers. Int J Health Serv 1989; 19(1):135-55.

33. Hall BL. From margins to center? The development and purpose of participatory research. Am Sociol 1992; 23(15-28).

34. Himmelman AT . Communities Working Collaboratively for a Change. Minneapolis, MN: Humphrey Institute for Public Affiars: University of Minnesota, 1992.

35. Butterfoss FD, Goodman RM, Wandersman A. Community coalitions for prevention and health promotion. Health Educ Res 1993; 8(3):315-30.

36. Altman DG. Sustaining interventions in community systems: on the relationship between researchers and communities. Health Psychol 1995; 14(6):526-36.

37. Schensul JJ, Denelli-Hess D, Borreo MG, et al. Urban comadronas: Maternal and child health research and policy formulation in a Puerto Rican community. In: Stull DD, Schensul JJ, eds. Collaborative Research and Social Changes: Applied Anthrology in Action. Boulder, Col: Westview Press, 1987.

38. Brown P. The role of the evaluator in comprehensive community initiatives. In: Connel JP, Kubisch AC, Schorr LB, Weiss CH, eds. New Approaches to Evaluating Community Initiatives. Washington, DC: Aspen, 1995.

39. Cousins JB, Earl LM, eds. Participatory Evaluation: Studies in Evaluation Use and Organizational Learning. London: Falmer, 1995.

40. Schulz AJ, Parker EA, Israel BA, et al. Conducting a participatory community-based survey: Collecting and interpreting data from a community health intervention on Detroit's East Side. J Public Health Manag Pract 1997; 4(2):10-24.

41. Vega WA. Theoretical and pragmatic implications of cultural diversity for community research. Am J Comm Psychol 1992; 20:375-91.

42. Dressler WW. Commentary on "Community research: Partnership in Black communities". J Prev Med 1993; 9:31-4.

43. Gaventa J. The powerful, the powerless, and the experts: Knowledge struggles in an information age. In: Park P, Brydon-Miller M, Hall B, Jackson T, eds. Voices of Change: Participatory Research in the United States and Canada. Westport, CT: Bergin, Garvey, 1993.

44. Elden M, Levin M. Natural Helper Models to Enhance a Community's Competence. In: Whyte WF, ed. Participatory Action Research. Newbury Park, CA: Sage, 1994.

45. Bishop R. Addressing issues of self-determination and legitimation in Kaupapa Maori research. In: Webber B, ed. Research Perspectives in Maori Education. Wellington, New Zealand: Council on Education Research, 1996.

46. deKoning K, Martin M. Participatory research in health: Setting the context. In: deKoning K, Martin M, eds. Participatory Research in Health: Issues and Experiences. London: Zed Books, 1996.

47. Maguire P. Considering more feminist participatory research: What's congruency got to do with it? Qual Inq 1996; 2:106-18.

48. Conference on Community-Based Participatory Research -- Conference Minutes [Web Page]. Available at http://www.ahcpr.gov/about/cpcr/cbpr/.

49. Suderman EM, Deatrich JV, Johnson LS, Sawatzky-Dickson DM. Action research sets the stage to improve discharge preparation. Pediat Nurs 2000; 26(6):571-6.

50. Craft MJ, Willadsen JA. Interventions related to family. Nurs Clin North Am 1992; 27(2):517-40.

51. Glasgow RE, Bull SS, Gillette C, et al. Behavior change intervention research in healthcare settings: a review of recent reports with emphasis on external validity. Am J Prev Med 2002; 23(1):62-9.

52. Keyserling TC, Ammerman AS, Davis CE, et al. A randomized controlled trial of a physician-directed treatment program for low-income patients with high blood cholesterol: the Southeast Cholesterol Project. Arch Fam Med 1997; 6(2):135-45.

53. Israel BA, Lichtenstein R, Lantz P *et al*. The Detroit Community-Academic Urban Research Center: development, implementation, and evaluation. J Pub Health Manag Pract 2001; 7(5):1-19.

54. Higgins DL, Maciak B, Metzler M, CDC Urban Research C. CDC Urban Research Centers: community-based participatory research to improve the health of urban communities. J Womens Health Gend Based Med 2001; 10(1):9-15.

55. Higgins DL, Metzler M. Implementing community-based participatory research centers in diverse urban settings. J Urban Health 2001; 78(3):488-94.

56. Freudenberg N. Case history of the Center for Urban Epidemiologic Studies in New York City. J Urban Health 2001; 78(3):508-18.

57. Eisinger A, Senturia K. Doing community-driven research: a description of Seattle Partners for Healthy Communities. J Urban Health 2001; 78(3):519-34.

58. Lantz PM, Viruell-Fuentes E, Israel BA, et al. Can communities and academia work together on public health research? Evaluation results from a community-based participatory research partnership in Detroit. J Urban Health 2001; 78(3):495-507.

59. O'Fallon LR, Dearry A. Community-based participatory research as a tool to advance environmental health sciences. Environ Health Perspect 2002; 110 Suppl 2:155-9.

60. National Institute of Environmental Health Sciences, Division of Extramural Research and Training. Interagency Working Group for Community-based Participatory Research [Web Page]. Available at http://www.niehs.nih.gov/translat/IWG/iwghome.htm.

61. Lohr KN, Carey TS. Assessing "best evidence": issues in grading the quality of studies for systematic reviews. Jt Comm J Qual Improv 1999; 25(9):470-9.

62. West SL, King V, Carey TS *et al*. Systems to Rate the Strength of Scientific Evidence. Evidence Report, Technology Assessment No. 47: Rockville, Md.: Agency for Healthcare Research and Quality. AHRQ Publication No. 02-E016, 2002.

63. Graves WH. NIDRR plans for the future. Assist Technol 1993; 5(1):3-6.

64. Holder HD, Moore RS. Institutionalization of community action projects to reduce alcohol-use related problems: Systematic facilitators. Substance Use Misuse 2000; 35(1-2):75-86.

65. Batalden PB, Cronenwett LR, Brown LL, et al. Collaboration in improving care for patients: how can we find out what we haven't been able to figure out yet? Jt Comm J Qual Improv 1998; 24(10):609-18.

66. Chesler MA. Participatory action research with self-help groups: an alternative paradigm for inquiry and action. Am J Comm Psychol 1991; 19(5):757-68.

67. Kovacs PJ. Participatory action research and hospice: a good fit. Hospice J Physic Psychosoc Pastor Care Dying 2000; 15(3):55-62.

68. Mason R, Boutilier M. The challenge of genuine power sharing in participatory research: the gap between theory and practice. Can J Comm Ment Health 1996; 15(2):145-52.

69. Minkler M. Using Participatory Action Research to build Healthy Communities. Public Health Rep 2000; 115(2-3):191-7.

70. Quigley D, Handy D, Goble R, Sanchez V, George P. Participatory research strategies in nuclear risk management for native communities. J Health Communic 2000; 5(4):305-31.

71. Smith SE, Pyrch T, Lizardi AO. Participatory action-research for health. World Health Forum 1993; 14(3):319-24.

72. Stein BD, Kataoka S, Jaycox LH *et al*. Theoretical basis and program design of a school-based mental health intervention for traumatized immigrant children: a collaborative research partnership. J Behav Health Serv Res 2002; 29(3):318-26.

73. Wang CC, Yi WK, Tao ZW, Carovano K. Photovoice as a participatory health promotion strategy. Health Promot Int 1998; 13(1):75-86.

74. Anyanwu CN. The technique of participatory research in community development. Community Develop J 1988; 23(1):11-5.

75. Badger TG. Action research, change and methodological rigour. J Nurs Manag 2000; 8(4):201-7.

76. Boston P, Jordan S, MacNamara E *et al*. Using participatory action research to understand the meanings aboriginal Canadians attribute to the rising incidence of diabetes. Chron Dis Can 1997; 18(1):5-12.

77. Herbert CP. Community-based research as a tool for empowerment: the Haida Gwaii Diabetes Project example. Can J Pub Health 1996; 87(2):109-12.

78. Macaulay AC, Delormier T, McComber AM *et al*. Participatory research with native community of Kahnawake creates innovative Code of Research Ethics. Can J Pub Health 1998; 89(2):105-8.

79. Seeley JA, Kengeya-Kayondo JF, Mulder DW. Community-based HIV/AIDS research--whither community participation? Unsolved problems in a research programme in rural Uganda. Soc Sci Med 1992; 34(10):1089-95.

80. Stewart R, Bhagwanjee A. Promoting group empowerment and self-reliance through participatory research: a case study of people with physical disability. Disabil Rehab 1999; 21(7):338-45.

81. Wallerstein N. A participatory evaluation model for Healthier Communities: developing indicators for New Mexico. Public Health Rep 2000; 115(2-3):199-204.

82. Drevdahl D. Coming to voice: the power of emancipatory community interventions. Adv Nurs Sci 1995; 18(2):13-24.

83. Hagey RS. The use and abuse of participatory action research. Chronic Dis Can 1997; 18(1):1-4.

84. Macleod C. Research as intervention within community mental health. Curationis 1997; 20(2):53-6.

85. Singer M. Community-Centered Praxis: Toward an Alternative Non-Dominative Applied Anthropology. Hum Organ 1994; 53(4):winter, 336-44.

86. Townsend E, Birch DE, Langley J, Langille L. Participatory research in a mental health clubhouse. Occupat Ther J Res 2000; 20(1):18-44.

87. VanderPlaat M. Emancipatory Politics, Critical Evaluation and Government Policy. Washington, DC: American Sociological Association, 1997.

88. Wing S. Social responsibility and research ethics in community-driven studies of industrialized hog production. Environ Health Perspect 2002; 110(5):437-44.

89. Stern G. Research, action, and social betterment. Am Behav Sci 1985; 29(2):229-48.

90. Weissberg RP , Greenberg MT. Prevention science and collaborative community action research: Combining the best from both perspectives. J Ment Health UK 1998; 7(5):479-92.

91. Diaz M, Simmons R. When is research participatory? Reflections on a reproductive health project in Brazil. J Womens Health 1999; 8(2):175-84.

92. Moyer A, Coristine M, MacLean L, Meyer M. A model for building collective capacity in community-based programs: the Elderly in Need Project. Pub Health Nurs 1999; 16(3):205-14.

93. Flynn BC, Ray DW, Rider MS. Empowering communities: action research through healthy cities. Health Educat Q 1994; 21(3):395-405.

94. Stebbins MW, Snow CC. Processes and payoffs of programmatic action research. J Appl Behav Sci 1982; 18(1):69-86.

95. Chrisman NJ, Senturia K, Tang G, Gheisar B. Qualitative process evaluation of urban community work: a preliminary view. Health Educat Beh 2002; 29(2):232-48.

96. Biggs S . Resource-poor farmer participation in research: A synthesis of experiences from nine national agricultural research systems, OFCOR Comparative Study Paper 3. The Hague: International Service for National Agricultural Research, 1989.

97. Freire P. Pedagogy of the Oppressed. New York: Seabury Press, 1970.

98. Habermas J. The Theory of Communicative Action. Cambridge, Mass: Polity Press, 1984.

99. Wang C, Burris MA, Ping XY. Chinese village women as visual anthropologists: a participatory approach to reaching policymakers. Soc Sci Med 1996; 42(10):1391-400.

100. Green L, Fullilove M, Evans D, et al. "Hey, mom, thanks!": use of focus groups in the development of place-specific materials for a community environmental action campaign. Environ Health Perspect 2002; 110 Suppl 2:265-9.

101. Ivanov LL, Flynn BC. Utilization and satisfaction with prenatal care services. West J Nurs Res 1999; 21(3):372-86.

102. Giesbrecht N, Ferris J. Community-based research initiatives in prevention. Addiction 1993; 88 Suppl:83S-93S.

103. McQuiston TH. Empowerment evaluation of worker safety and health education programs. Am J Ind Med 2000; 38(5):584-97.

104. Wang CC. Photovoice: a participatory action research strategy applied to women's health. J Women Health 1999; 8(2):185-92.

105. Green L, Daniel M, Novick L. Partnerships and coalitions for community-based research. Public Health Rep 2001; 116 Suppl 1:20-31.

106. Schulz AJ, Parker EA, Israel BA, Becker AB, Maciak BJ, Hollis R. Conducting a participatory community-based survey for a community health intervention on Detroit's east side. J Pub Health Manag Pract 1998; 4(2):10-24.

107. Casswell S. A decade of community action research. Subst Use Misuse 2000; 35(1-2):55-74.

108. Spigner C. African Americans, Democracy, and Biomedical and Behavioral Research: Contradictions or Consensus in Community-Based Participatory Research? Int Q Community Health Educ 1999-2000; 19(3):259.

109. Jensen GM, Royeen CB. Improved rural access to care: dimensions of best practice. J Interprof Care 2002; 16(2):117-28.

110. Labonte R. Health promotion and empowerment: reflections on professional practice. Health Educ Q 1994; 21(2):253-68.

111. Reason P, Torbert WR. The Action Turn: Toward a Transformational Social Science. Concepts Transform 2001; 6(1):1-37.

112. Schulz AJ, Parker EA, Israel BA, Allen A, Decarlo M, Lockett M. Addressing social determinants of health through community-based participatory research: the East Side Village Health Worker Partnership. Health Educ Behav 2002; 29(3):326-41.

113. Wagenaar AC , Murray DM, Toomey TL. Communities mobilizing for change on alcohol (CMCA): effects of a randomized trial on arrests and traffic crashes. Addiction 2000; 95(2):209-17.

114. Wagenaar AC , Murray DM, Wolfson M, et al. Communities Mobilizing for Change on Alcohol: Design of a Randomized Community Trial. J Comm Psychol 1994; Special Issue:79-101.

115. Wagenaar AC, Murray DM, Gehan JP, et al. Communities mobilizing for change on alcohol: outcomes from a randomized community trial. J Stud Alcohol 2000; 61(1):85-94.

116. Wagenaar AC , Gehan JP, Jones Webb R *et al*. Communities Mobilizing for Change on Alcohol: Lessons and results from a 15-community randomized trial. J Comm Psychol 1999; 27(3):315-26.

117. Wagenaar AC , Perry CL. Community Strategies for the Reduction of Youth Drinking: Theory and Application. J Res Adolesc 1994; 4(2):319-45.

118. Wagenaar AC, Toomey TL, Murray DM, et al. Sources of alcohol for underage drinkers. J Stud Alcohol 1996; 57(3):325-33.

119. Green LW, Levine DM, Deeds S. Clinical Trials of Health Education for Hypertensive Outpatients: Design and Baseline Data. Prev Med 1975; 4:417-25.

120. Levine DM, Green LW, Deeds SG, et al. Health Education for Hypertensive Patients. J Am Med Assoc 1979; 241(16):1700-3.

121. Morisky DA, Levine DM, Green LW, et al. Five-Year Blood Pressure Control and Mortality Following Health Education for Hypertensive Patients. Am J Pub Health 1983; 73(2):153-62.

122. Levine DM, Becker DM, Bone LR, et al. A Partnership with Minority Populations: A Community Model of Effectiveness Research. Ethnic Dis 1992; 2:296-305.

123. Lam TK, McPhee SJ, Mock J, et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. J Gen Intern Med 2003; 18(7):516-24.

124. Koopman C, Angell K, Turner-Cobb JM, et al. Distress, coping, and social support among rural women recently diagnosed with primary breast cancer. Breast J 2001; 7(1):25-33.

125. Angell KL, Kreshka MA, McCoy R, et al. Psychosocial intervention for rural women with breast cancer. J Gen Intern Med 2003; 18(7):499-507.

126. Flaskerud JH, Nyamathi AM, Uman GC. Longitudinal effects of an HIV testing and counseling programme for low-income Latina women. Ethn Health 1997; 2(1-2):89-103.

127. Flaskerud JH, Nyamathi AM. Collaborative inquiry with low-income Latina women. J Health Care Poor Underserv 2000; 11(3):326-42.

128. Flaskerud JH, Nyamathi AM. Home medication injection among Latina women in Los Angeles: implications for health education and prevention. AIDS Care 1996; 8(1):95-102.

129. Flaskerud JH, Uman G, Lara R, et al. Sexual Practices, Attitudes and Knowledge Related to HIV Transmission in Low Income Los Angeles Hispanic Women . J Sex Res 1996; 33(4):343-53.

130. Flaskerud JH, Calvillo ER. Beliefs about AIDS, health, and illness among low-income Latina women. Res Nurs Health 1991; 14(6):431-8.

131. Masi CM, Suarez-Balcazar Y, Cassey MZ, et al. Internet access and empowerment: a community-based health initiative. J Gen Intern Med 2003; 18(7):525-30.

132. Wismer BA, Moskowitz JM, Min K, et al. Interim assessment of a community intervention to improve breast and cervical cancer screening among Korean American women. J Public Health Manag Pract 2001; 7(2):61-70.

133. Chen AM, Wismer BA, Lew R *et al*. 'Health is strength': a research collaboration involving Korean Americans in Alameda County. Am J Prevent Med 1997; 13(6 Suppl):93-100.

134. Wismer BA, Moskowitz JM, Chen AM, et al. Rates and independent correlates of Pap smear testing among Korean-American women. Am J Public Health 1998; 88(4):656-60.

135. Daniel M, Green LW, Marion SA, et al. Effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada. Soc Sci Med 1999; 48(6):815-32.

136. Gotay CC, Banner RO, Matsunaga DS, et al. Impact of a culturally appropriate intervention on breast and cervical screening among native Hawaiian women. Prev Med 2000; 31(5):529-37.

137. Matsunaga DS, Enos R, Gotay CC, et al. Participatory research in a Native Hawaiian community. The Wai'anae Cancer Research Project. Cancer 1996; 78(7 Suppl):1582-6.

138. Banner RO, DeCambra H, Enos R *et al*. A breast and cervical cancer project in a native Hawaiian community: Wai'anae cancer research project. Prev Med 1995; 24(5):447-53.

139. Rosenberg Z, Findley S, McPhillips S, et al. Community-based strategies for immunizing the "hard-to-reach" child: the New York State immunization and primary health care initiative. Am J Prev Med 1995; 11(3 Suppl):14-20.

140. Hugentobler MK, Israel BA, Schurman SJ. An action research approach to workplace health: Integrating methods. Health Educat Q 1992; 19(1):55-76.

141. Heaney CA, Israel BA, Schurman SJ, et al. Industrial Relations, Worksite Stress Reduction, and Employee Well-Being: A Participatory Action Research Investigation. J Org Behav 1993; 14(5):495-510.

142. Baker EA, Israel BA, Schurman SJ. A participatory approach to worksite health promotion. J Ambul Care Manage 1994; 17(2):68-81.

143. Schurman SJ . Making the 'new American workplace' safe and healthy: a joint labor-management-researcher approach. Am J Indust Med 1996; 29 (4):373-7.

144. Stevens PE. HIV Prevention Education for Lesbians and Bisexual Women: A Cultural Analysis of a Community Intervention. Soc Sci Med 1994; 39(11):1565-78.

145. Stevens PE, Hall JM. Participatory action research for sustaining individual and community change: a model of HIV prevention education. AIDS Educ Prevent 1998; 10(5):387-402.

146. Keeler GJ, Dvonch T, Yip FY *et al*. Assessment of personal and community-level exposures to particulate matter among children with asthma in Detroit, Michigan, as part of Community Action Against Asthma (CAAA). Environ Health Perspect 2002; 110 Suppl 2:173-81.

147. Parker EA, Israel BA, Williams M, et al. Community action against asthma: examining the partnership process of a community-based participatory research project. J Gen Intern Med 2003; 18(7):558-67.

148. Clark NM, Brown RW, Parker E, et al. Childhood asthma. Environ Health Perspect 1999; 107 Suppl 3:421-9.

149. Corbie-Smith G, Ammerman AS, Katz ML, et al. Trust, benefit, satisfaction, and burden: a randomized controlled trial to reduce cancer risk through African-American churches. J Gen Intern Med 2003; 18(7):531-41.

150. Ammerman A, Washington C, Jackson B, et al. The PRAISE! Project: A church-based nutrition intervention designed for cultural appropriateness, sustainability and diffusion. J Health Promotion Pract 2002; 3(2):286-301.

151. Krieger JW, Song L, Takaro TK, et al. Asthma and the home environment of low-income urban children: preliminary findings from the Seattle-King County healthy homes project. J Urban Health 2000; 77(1):50-67.

152. Krieger JW, Castorina JS, Walls ML, et al. Increasing influenza and pneumococcal immunization rates: a randomized controlled study of a senior center-based intervention. Am J Prev Med 2000; 18(2):123-31.

153. Kegler MC, Malcoe LH, Lynch RA, et al. A community-based intervention to reduce lead exposure among Native American children. Environ Epidemiol Toxicol 2000; 2:121-32.

154. Moyer A, Coristine M, Jamault M, Roberge G, O'Hagan M. Identifying older people in need using action research. J Clin Nurs 1999; 8(1):103-11.

155. van Olphen J, Schulz A, Israel B, et al. Religious involvement, social support, and health among African-American women on the east side of Detroit. J Gen Intern Med 2003; 18(7):549-57.

156. Becker AB, Israel BA, Schulz AJ, et al. Predictors of perceived control among African American women in Detroit: exploring empowerment as a multilevel construct. Health Educ Behav 2002; 29(6):699-715.

157. Israel BA, Farquhar SA, Schulz AJ, et al. The relationship between social support, stress, and health among women on Detroit's East Side. Health Educ Behav 2002; 29(3):342-60.

158. Schulz AJ, Israel BA, Parker EA, Lockett M, Hill Y, Wills R. The East Side Village Health Worker Partnership: integrating research with action to reduce health disparities. Public Health Rep 2001; 116(6):548-57.

159. Parker EA, Lichtenstein RL, Schulz AJ *et al*. Disentangling measures of individual perceptions of community social dynamics: results of a community survey. Health Educ Behav 2001; 28(4):462-86.

160. Schulz A, Parker E, Israel DB, et al. Social context, stressors, and disparities in women's health. J Am Med Womens Assoc 2001; 56(4):143-9.

161. Schulz A, Israel B, Williams D, et al. Social inequalities, stressors and self reported health status among African American and white women in the Detroit metropolitan area. Soc Sci Med 2000; 51(11):1639-53.

162. Parker EA, Schulz AJ, Israel BA, Hollis R. Detroit's East Side Village Health Worker Partnership: community-based lay health advisor intervention in an urban area. Health Educ Behav 1998; 25(1):24-45.

163. Schulz AJ, Israel BA, Becker AB, et al. "It's a 24-hour thing ... a living-for-each-other concept": identity, networks, and community in an urban village health worker project. Health Educ Behav 1997; 24(4):465-80.

164. Perera FP, Illman SM, Kinney PL *et al*. The challenge of preventing environmentally related disease in young children: community-based research in New York City. Environ Health Perspect 2002; 110(2):197-204.

165. Evans DT, Fullilove MT, Green L, et al. Awareness of environmental risks and protective actions among minority women in Northern Manhattan. Environ Health Perspect 2002; 110 Suppl 2:271-5.

166. Macaulay AC , Paradis G, Potvin L *et al*. The Kahnawake Schools Diabetes Prevention Project: intervention, evaluation, and baseline results of a diabetes primary prevention program with a native community in Canada. Prev Med 1997; 26(6):779-90.

167. Potvin L, Cargo M, McComber AM, et al. Implementing participatory intervention and research in communities: lessons from the Kahnawake Schools Diabetes Prevention Project in Canada. Soc Sci Med 2003; 56(6):1295-305.

168. Macaulay AC , Cross EJ, Delormier T, Potvin L, Paradis G, McComber A. Developing a Code of Research Ethics for research with a Native community in Canada: a report from the Kahnawake Schools Diabetes Prevention Project. Int J Circumpolar Health 1998; 57 Suppl 1:38-40.

169. McComber AM, Macaulay AC, Kirby R, et al. The Kahnawake Schools Diabetes Prevention Project: community participation in a diabetes primary prevention research project. Int J Circumpolar Health 1998; 57 Suppl 1:370-4.

170. Maciak BJ, Guzman R, Santiago A, Villalobos G, Israel BA. Establishing LA VIDA: a community-based partnership to prevent intimate violence against Latina women. Health Educ Behav 1999; 26(6):821-40.

171. Baldwin JH, Rawlings A, Marshall ES, et al. Mom empowerment, too! (ME2): a program for young mothers involved in substance abuse. Public Health Nurs 1999; 16(6):376-83.

172. Arcury TA, Austin CK, Quandt SA, et al. Enhancing community participation in intervention research: farmworkers and agricultural chemicals in North Carolina. Health Educ Behav 1999; 26(4):563-78.

173. Quandt SA, Arcury TA, Pell AI. Something for everyone? A community and academic partnership to address farmworker pesticide exposure in North Carolina. Environ Health Perspect 2001; 109 Suppl 3:435-41.

174. Eng E, Parker E. Measuring community competence in the Mississippi Delta: the interface between program evaluation and empowerment. Health Educ Q 1994; 21(2):199-220.

175. Maciak BJ, Moore MT, Leviton LC, et al. Preventing Halloween arson in an urban setting: a model for multisectoral planning and community participation. Health Educ Behav 1998; 25(2):194-211.

176. Factor SH, Galea S, de Duenas Geli LG, et al. Development of a "survival" guide for substance users in Harlem, New York City. Health Educ Behav 2002; 29(3):312-25.

177. Galea S, Factor SH, Palermo AG, Aaron D, Canales E, Vlahov D . Access to resources for substance users in Harlem, New York City: Service provider and client perspectives. Health Educat Behav 2002; 29(3):296-311.

178. Arthur HM, Wright DM, Smith KM. Women and heart disease: the treatment may end but the suffering continues. Can J Nurs Res 2001; 33(3):17-29.

179. Sloane DC, Diamant AL, Lewis LB, et al. Improving the nutritional resource environment for healthy living through community-based participatory research. J Gen Intern Med 2003; 18(7):568-75.

180. Reese DJ, Ahern RE, Nair S, et al. Hospice access and use by African Americans: addressing cultural and institutional barriers through participatory action research. Soc Work 1999; 44(6):549-59.

181. McCauley LA, Lasarev MR, Higgins G, et al. Work characteristics and pesticide exposures among migrant agricultural families: a community-based research approach. Environ Health Perspect 2001; 109(5):533-8.

182. McCauley LA, Beltran M, Phillips J, et al. The Oregon migrant farmworker community: an evolving model for participatory research. Environ Health Perspect 2001; 109 Suppl 3:449-55.

183. Mergler D, Brabant C, Vezina N, et al. The weaker sex? Men in women's working conditions report similar health symptoms. J Occup Med 1987; 29(5):417-21.

184. Mergler D. Worker participation in occupational health research: theory and practice. Int J Health Serv 1987; 17(1):151-67.

185. Lee PT, Krause N. The impact of a worker health study on working conditions. J Public Health Policy 2002; 23(3):268-85.

186. Flocks J, Clarke L, Albrecht S, et al. Implementing a community-based social marketing project to improve agricultural worker health. Environ Health Perspect 2001; 109 Suppl 3:461-8.

187. Kieffer EC, Willis SK, Arellano N, et al. Perspectives of pregnant and postpartum latino women on diabetes, physical activity, and health. Health Educ Behav 2002; 29(5):542-56.

188. Tsark JA. A participatory research approach to address data needs in tobacco use among Native Hawaiians. Asian Am Pacific Island J Health 2001-2002; 9(1):40-8.

189. Minkler M, Thompson M, Bell J, Rose K. Contributions of community involvement to organizational-level empowerment: the federal Healthy Start experience. Health Educ Behav 2001; 28(6):783-807.

190. Horowitz CR, Williams L, Bickell NA. A community-centered approach to diabetes in East Harlem. J Gen Intern Med 2003; 18(7):542-8.

191. Minkler M, Fadem P, Perry M, Blum K, Moore L, Rogers J. Ethical dilemmas in participatory action research: a case study from the disability community. Health Educ Behav 2002; 29(1):14-29.

192. Dickson G, Green KL. Participatory action research: lessons learned with Aboriginal grandmothers. Health Care Women Int 2001; 22(5):471-82.

193. Dickson G. Aboriginal grandmothers' experience with health promotion and participatory action research. Qualit Health Res 2000; 10(2):188-213.

194. Hiebert W, Swan D. Positively Fit: A Case Study in Community Development and the Role of Participatory Action Research. Comm Develop J 1999; 34(4):Oct, 356-64.

195. Eng E, Blanchard L. Action-Oriented Community Diagnosis: A Health Education Tool. Int Q Comm Health Educat 1991; 11(2):93-110.

196. Stajduhar KI, Lindsey E. Home away from home: essential elements in developing housing options for people living with HIV/AIDS. AIDS Patient Care Stds 1999; 13(8):481-91.

197. Plaut T, Landis S, Trevor J. Enhancing Participatory Research with the Community Oriented Primary Care Model: A Case Study in Community Mobilization. Am Sociol 1992; 56-70.

198. Rains JW, Ray DW. Participatory action research for community health promotion. Pub Health Nurs 1995; 12(4):256-61.

199. Lauderdale DS, Kuohung V, Chang SL, et al. Identifying older Chinese immigrants at high risk for osteoporosis. J Gen Intern Med 2003; 18(7):508-15.

200. Ledogar RJ, Acosta LG, Penchaszadeh A. Building international public health vision through local community research: the El Puente-CIET partnership. Am J Public Health 1999; 89(12):1795-7.

201. Ledogar RJ, Penchaszadeh A, Garden CC, et al. Asthma and Latino cultures: different prevalence reported among groups sharing the same environment. Am J Public Health 2000; 90(6):929-35.

202. Corburn J. Combining community-based research and local knowledge to confront asthma and subsistence-fishing hazards in Greenpoint/Williamsburg, Brooklyn, New York. Environ Health Perspect 2002; 110 Suppl 2:241-8.

203. Adrien A, Godin G, Cappon P, et al. Overview of the Canadian study on the determinants of ethnoculturally specific behaviours related to HIV/AIDS. Can J Public Health 1996; 87 Suppl 1:S4-10.

204. Willms D, Bhatia R, Lowe J, Niemi F, Stewart D, Westmoreland-Traore J. Five conversations: reflections of stakeholders on the impact of the ethnocultural communities facing AIDS study. Can J Public Health 1996; 87 Suppl 1:S44-8, S49-53.

205. Willms D, Singer SM, Adrien A, et al. Participatory aspects in the qualitative research design of phase II of the ethnocultural communities facing AIDS study. Can J Public Health 1996; 87 Suppl 1:S15-25, S16-27.

206. Singer SM, Willms DG, Adrien A, et al. Many voices--sociocultural results of the ethnocultural communities facing AIDS study in Canada. Can J Public Health 1996; 87 Suppl 1:S26-32, S28-35.

207. Maticka-Tyndale E, Godin G, LeMay G, et al. Canadian ethnocultural communities facing AIDS: overview and summary of survey results from phase III. Can J Public Health 1996; 87 Suppl 1:S38-43, S42-8.

208. Cappon P, Adrien A, Godin G, et al. HIV/AIDS in the context of culture: selection of ethnocultural communities for study in Canada. Can J Public Health 1996; 87 Suppl 1:S11-4, S11-5.

209. Mullings L, Wali A, McLean D *et al*. Qualitative methodologies and community participation in examining reproductive experiences: the Harlem Birth Right Project. Matern Child Health J 2001; 5(2):85-93.

210. Parsons ML, Warner-Robbins C. Formerly incarcerated women create healthy lives through participatory action research. Holist Nurs Pract 2002; 16(2):40-9.

211. Parsons ML, Warner-Robbins C. Factors that support women's successful transition to the community following jail/prison. Health Care Women Int 2002; 23(1):6-18.

212. Stratford D, Chamblee S, Ellerbrock TV, et al. Integration of a participatory research strategy into a rural health survey. J Gen Intern Med 2003; 18(7):586-8.

213. Kinney PL, Aggarwal M, Northridge ME, et al. Airborne concentrations of PM(2.5) and diesel exhaust particles on Harlem sidewalks: a community-based pilot study. Environ Health Perspect 2000; 108(3):213-8.

214. Northridge ME, Yankura J, Kinney PL, et al. Diesel exhaust exposure among adolescents in Harlem: a community-driven study. Am J Public Health 1999; 89(7):998-1002.

215. Wing S, Wolf S. Intensive livestock operations, health, and quality of life among eastern North Carolina residents. Environ Health Perspect 2000; 108(3):233-8.

216. Wing S, Cole D, Grant G. Environmental injustice in North Carolina's hog industry. Environ Health Perspect 2000; 108(3):225-31.

217. Vander Stoep A, Williams M, Jones R, Green L, Trupin E. Families as full research partners: what's in it for us?. J Behav Health Serv Res 1999; 26(3):329-44.

218. el-Askari G, Freestone J, Irizarry C, et al. The Healthy Neighborhoods Project: a local health department's role in catalyzing community development. Health Educ Behav 1998; 25(2):146-59.

219. Yoshihama M , Carr ES. Community Participation Reconsidered: Feminist Participatory Action Research With Hmong Women . J Comm Pract 2002; 10(4):85-103.

220. Choudhry UK , Jandu S, Mahal J, Singh R, Sohi Pabla H, Mutta B. Health promotion and participatory action research with South Asian women. J Nurs Scholarsh 2002; 34(1):75-81.

221. Green L, Daniel M. Guidelines and Categories for Classifying Participatory Research Projects in Health Promotion [Web Page]. Available at http://lgreen.net/guidelines/html. (Accessed 29 October 2003).

222. Wismer BA, Moskowitz JM, Chen AM, et al. Mammography and clinical breast examination among Korean American women in two California counties. Prev Med 1998; 27(1):144-51.

223. Israel BA, House JS, Schurman SJ, et al. The relation of personal resources, participation, influence, interpersonal relationships and coping strategies to occupational stress, job strains and health: a multivariate analysis. Work Stress 1989; 3(2):163-94.

224. Israel BA, Schurman SJ, Hugentobler MK. Conducting Action Research: Relationships Between Organization Members and Researchers. J App Behav Science 1992; 28(1):74-101.

225. Godin G, Maticka-Tyndale E, Adrien A, et al. Understanding use of condoms among Canadian ethnocultural communities: methods and main findings of the survey. Can J Public Health 1996; 87 Suppl 1:S33-7, S36-41.

226. Israel BA, Schulz AJ, Parker EA, et al. Community-based Participatory Research: Policy Recommendations for Promoting a Partnership Approach in Health Research. Educ Health 2001; 14(2):182-97.

227. O'Fallon LR , Tyson FL, Dearry A. Successful Models of Community-Based Participatory Research. Final Report of a meeting hosted by the National Institute of Environmental Health Sciences. March 29-31, 2000 - Washington, DC [Web Page]. Available at http://www.niehs.nih.gov/translat/cbr-final.pdf. (Accessed 13 January 2004).

228. Green LW. Appendix B. Tracing Federal Support for Participatory Research in Public Health. Minkler M, Wallerstein N, eds. Community-Based Participatory Research for Health. San Francisco, CA: Jossey-Bass, 2003.

229. Shepard PM, Northridge ME, Prakash S, et al. Preface: Advancing Environmental Justice through Community-Based Participatory Research. Environmental Health Perspectives Supplements 2002; 110(2).

230. Seifer SD, Shore N, Holmes SL. Developing and sustaining community-university partnerships for health research: infrastructure requirements. A report to the NIH Office of Behavioral and Social Sciences Research. 2003.

231. Moher D, Schulz KF, Altman D. The CONSORT Statement: Revised Recommendations for Improving the Quality of Reports of Parallel-Group Randomized Trials. J Am Med Assoc 2001; 285(15):1987-91.

232. Stroup DF, Berlin JA, Morton SC, et al. Meta-analysis of observational studies in epidemmiology: a proposal for reporting. Meta-analysis of Observational Studies in Epidemiology (MOOSE) group. J Am Med Assoc 2000; 283(15):2008-12.

233. Soares HP, Daniels S, Kumar A, et al. Bad reporting does not mean bad methods for randomised trials: observational study of randomised controlled trials performed by the Radiation Therapy Oncology Group. BMJ 2004; 328:22-4.

234. del Giglio A, Costa LJ. The quality of randomised controlled trials may be better than assumed. BMJ 2004; 24-25.

235. O'Toole TP, Aaron KF, Chin MH, et al. Community-based participatory research: opportunities, challenges, and the need for a common language. J Gen Intern Med 2003; 18:592-4.

Listing of Excluded Studies

1. Adams, M. J. Jr and Hollowell, J. G. Community-based projects for the prevention of developmental disabilities. Mental Retardation. 1992 Dec; 30(6):331-6.
   Notes: No CBPR

2. Adrien, A.; Godin, G.; Cappon, P.; Singer, S. M.; Maticka-Tyndale, E., and Willms, D. Overview of the Canadian study on the determinants of ethnoculturally specific behaviours related to HIV/AIDS. Can J Public Health. 1996 May-1996 Jun 30; 87 Suppl 1:S4-10.
   Notes: Review article

3. Ammerman, A; Lindquist, C; Hersey, J and others. Evidence report on the efficacy of interventions to modify dietary behavior related to evidence risk. Rockville, MD: Agency for Healthcare Research and Quality; 2001 Jan 25.
   Notes: Not relevant to intervention

4. Bailey . Using participatory research in community consortia development and evaluation: Lessons from the beginning of a story. 1992.
   Notes: Review article

5. Bailey. Using Participatory Research in community diagnosis: a health education tool. 1992.
   Notes: Process Evaluation

6. Baker, E. L. and Tyler, C. W. Research linkages between academia and public health practice: can they become a practical reality? Am J Prev Med. 1995 May-1995 Jun 30; 11(3 Suppl):13 .
   Notes: Review Article

7. Baquet, C. R. ; Hammond, C.; Commiskey, P.; Brooks, S., and Mullins, C. D. Health disparities research--a model for conducting research on cancer disparities: characterization and reduction. Journal of the Association for Academic Minority Physicians. 2002 Apr; 13(2):33-40.
   Notes: No CBPR

8. Benjamin, A. E. Consumer-directed services at home: a new model for persons with disabilities. Health Affairs. 2001 Nov-2001 Dec 31; 20(6):80-95.
   Notes: No research

9. Blair, L. Cutting and pasting in Quebec. Community health centres and health care reform. Can Fam Physician. 1999 Feb; 45:261-4, 268-72.
   Notes: Not relevant to intervention

10. Bond, F. W. and Bunce, D. Job control mediates change in a work reorganization intervention for stress reduction. Journal of Occupational Health Psychology. 2001 Oct; 6(4):290-302.
    Notes: Location

11. Booth, Tim and Booth, Wendy. Parents Together: Action Research and Advocacy Support for Parents with Learning Difficulties. Health-and-Social-Care-in-the-Community. 1999; 7(6):Nov, 464-474.
    Notes: Location

12. Bourke, L. Participatory research in breast cancer: a case study in regional Victoria. Contemporary Nurse. 2002 Jun; 12(3):246-52.
    Notes: Location

13. Brown and Detterman. Small interventions for large problems:Reshaping urban leadership networks. 1987; 23, (2): 151-168.
    Notes: No CBPR

14. Chenoweth, L. and Kilstoff, K. Facilitating positive changes in community dementia management through participatory action research. International Journal of Nursing Practice. 1998 Sep; 4(3):175-88.
    Notes: Location

15. Chrisman, N. J.; Senturia, K.; Tang, G., and Gheisar, B. Qualitative process evaluation of urban community work: a preliminary view. Health Education & Behavior. 2002 Apr; 29(2):232-48.
Notes: No study

16. Classen, C.; Abramson, S.; Angell, K.; Atkinson, A.; Desch, C.; Vinciguerra, V. P.; Rosenbluth, R. J.; Kirshner, J. J.; Hart, R.; Morrow, G., and Spiegel, D. Effectiveness of a training program for enhancing therapists' understanding of the supportive-expressive treatment model for breast cancer groups. J Psychother Pract Res. 1997 Summer; 6(3):211-8.
Notes: Not relevant to intervention

17. Cockburn, L. and Trentham, B. Participatory action research: integrating community occupational therapy practice and research. Canadian Journal of Occupational Therapy - Revue Canadienne d Ergotherapie. 2002 Feb; 69(1):20-30.
Notes: No CBPR

18. Cohen, L. K. Market and community responses to changing demands from the workplace. Community Health Studies. 1985; 9(1 Suppl):18S-24S.
Notes: No CBPR

19. Craft, M. J. and Willadsen, J. A. Interventions related to family. [Review] [35 refs]. Nursing Clinics of North America. 1992 Jun; 27(2):517-40.
Notes: Nursing participatory research

20. Davis, S. M. ; Going, S. B.; Helitzer, D. L.; Teufel, N. I. ; Snyder, P.; Gittelsohn, J.; Metcalfe, L.; Arviso, V.; Evans, M.; Smyth, M.; Brice, R., and Altaha, J. Pathways: a culturally appropriate obesity-prevention program for American Indian schoolchildren. Am J Clin Nutr. 1999 Apr; 69(4 Suppl):796S-802S.
Notes: No CBPR

21. Davis, S. M. and Reid, R. Practicing participatory research in American Indian communities. Am J Clin Nutr. 1999 Apr; 69(4 Suppl):755S-759S.
Notes: No CBPR

22. Dearry; Collman; Sainr; Fields, and Redd. Building a network of research om children's environmental health. 1999.
Notes: Review article

23. Deutsch, S. and Ognibene, A. ACP Community-Based Teaching Project. Am J Med. 1995 Jun; 98(6):521-3.
Notes: Professional Development

24. Diaz, T.; Sturm, T.; Matte, T.; Bindra, M.; Lawler, K.; Findley, S., and Maylahn, C. Medication use among children with asthma in East Harlem. Pediatrics. 2000 Jun; 105(6):1188-93.
Notes: No CBPR

25. Dickson, G. and Green, K. L. Participatory action research: lessons learned with Aboriginal grandmothers. Health Care for Women International. 2001 Jul-2001 Aug 31; 22(5):471-82.
Notes: Insufficient Information

26. Eisen, A. Survey of neighborhood-based, comprehensive community empowerment initiatives. Health Educ Q. 1994 Summer; 21(2):235-52.
Notes: No Research

27. Eng and Toung. Lay Health Advisors as community change agents. Fam Community Health. 1992; 15(1):24-40.
Notes: Review Article

28. Eng E and Hatch J. Networking Between Agencies and Black Churches: The Lay Health Advisor Model. In K. Pargament, K. Maton and R. Hess (eds) Religion and Prevention in Mental Health Research Vision, and Action. Springfield, IL: Haworth Press; 1993.
Notes: Book

29. Ervin, Alexander M. Collaborative and Participatory Research in Urban Social Planning and Restructuring: Anthropological Experiences from a Medium-Sized Canadian City. Human-Organization. 1996; 55(3):fall, 324-333.
Notes: Review Article

30. Felix-Aaron, Stryer. Moving from rhetoric to evidence based action in health care. 2003.
Notes: Review Article

31. Flaskerud, J. H. and Nyamathi, A. M. Effects of an AIDS education program on the knowledge, attitudes and practices of low income black and Latina women. J Community Health. 1990 Dec; 15(6):343-55.
Notes: Not relevant to intervention

32. Flaskerud, J. H. and Uman, G. Directions for AIDS education for Hispanic women based on analyses of survey findings. Public Health Rep. 1993 May-1993 Jun 30; 108(3):298-304.
Notes: Not relevant to intervention

33. Flaskerud, J. H. and Winslow, B. J. Conceptualizing vulnerable populations health-related research. Nurs Res. 1998 Mar-1998 Apr 30; 47(2):69-78.
Notes: Not relevant to intervention

34. Flynn, B. C. ; Ray, D. W., and Rider, M. S. Empowering communities: action research through healthy cities. Health Education Quarterly. 1994 Fall; 21(3):395-405.
Notes: Review Article

35. Ford, M. E.; Edwards, G.; Rodriguez, J. L.; Gibson, R. C., and Tilley, B. C. An empowerment-centered, church-based asthma education program for African American adults. Health & Social Work. 1996 Feb; 21(1):70-5.
Notes: Insufficient information

36. Levi, Lennart. Wroking Life. New York: University Press ; 1981.
Notes: Book chapter

37. Green, L. W.; George, M. A.; Daniel, M.; Franking, C. J.; Herbert, C. J.; Bowie, W. R., and et al. Study of Participatory Research in Health Promotion: Review and Recommendations for the Development of Participatory Research in Health Promotion in Canada. Ottawa, Canada: The Royal Society of Canada; 1995; ISBN-0-920064-55-8.
Notes: Book Chapter

38. Higgins, D. L.; Maciak, B.; Metzler, M., and CDC Urban Research, Centers. CDC Urban Research Centers: community-based participatory research to improve the health of urban communities. Journal of Womens Health & Gender-Based Medicine. 2001 Jan-2001 Feb 28; 10(1):9-15.
Notes: Review Article

39. Higgins, D. L. and Metzler, M. Implementing community-based participatory research centers in diverse urban settings. J Urban Health. 2001 Sep; 78(3):488-94.
Notes: Process Evaluation

40. Holder, Harold D and Moore, Roland S. Institutionalization of community action projects to reduce alcohol-use related problems: Systematic facilitators. Substance-Use-and-Misuse. 2000; 35(1-2):75-86.
Notes: Not research, unobtainable

41. Huby, G. Interpreting silence, documenting experience: an anthropological approach to the study of health service users' experience with HIV/AIDS care in Lothian, Scotland. Social Science & Medicine. 1997 Apr; 44(8):1149-60.
Notes: Location

42. Hugentobler, Margrit K; Israel, Barbara A, and Schurman, Susan J. An action research approach to workplace health: Integrating methods. Health-Education-Quarterly. 1992; 19(1):55-76.
Notes: Process Evaluation

43. Israel, B. A.; Checkoway, B.; Schulz, A., and Zimmerman, M. Health education and community empowerment: conceptualizing and measuring perceptions of individual, organizational, and community control. Health Educ Q. 1994 Summer; 21(2):149-70.
Notes: Not relevant to intervention

44. Israel, B. A.; Lichtenstein, R.; Lantz, P.; McGranaghan, R.; Allen, A.; Guzman, J. R.; Softley, D., and Maciak, B. The Detroit Community-Academic Urban Research Center: development, implementation, and evaluation. Journal of Public Health Management & Practice. 2001 Sep; 7(5):1-19.
Notes: Process Evaluation

45. Jenkins, C. N.; McPhee, S. J.; Bird, J. A.; Pham, G. Q. ; Nguyen, B. H.; Nguyen, T.; Lai, K. Q.; Wong, C., and Davis, T. B. Effect of a media-led education campaign on breast and cervical cancer screening among Vietnamese-American women. Prev Med. 1999 Apr; 28(4):395-406.
Notes: Not relevant to intervention

46. Jenkins, C. N.; McPhee, S. J.; Le, A.; Pham, G. Q.; Ha, N. T., and Stewart, S. The effectiveness of a media-led intervention to reduce smoking among Vietnamese-American men. Am J Public Health. 1997 Jun; 87(6):1031-4.
Notes: Not relevant to intervention

47. Karim, K. Assessing the strengths and weaknesses of action research. [Review] [25 refs]. Nursing Standard. 2001 Mar 14-2001 Mar 20; 15(26):33-5.
Notes: Review Article

48. Kieffer, E. C. Maternal obesity and glucose intolerance during pregnancy among Mexican-Americans. Paediatr Perinat Epidemiol. 2000 Jan; 14(1):14-9.
Notes: No CBPR

49. Kieffer, E. C.; Alexander, G. R.; Kogan, M. D.; Himes, J. H.; Herman, W. H.; Mor, J. M., and Hayashi, R. Influence of diabetes during pregnancy on gestational age-specific newborn weight among US black and US white infants. Am J Epidemiol. 1998 Jun 1; 147(11):1053-61.
Notes: No CBPR

50. Kieffer, E. C.; Carman, W. J.; Gillespie, B. W.; Nolan, G. H.; Worley, S. E., and Guzman, J. R. Obesity and gestational diabetes among African-American women and Latinas in Detroit: implications for disparities in women's health. J Am Med Womens Assoc. 2001 Fall; 56(4):181-7, 196.
Notes: No CBPR

51. Kieffer, E. C.; Martin, J. A., and Herman, W. H. Impact of maternal nativity on the prevalence of diabetes during pregnancy among U.S. ethnic groups. Diabetes Care. 1999 May; 22(5):729-35.
Notes: No CBPR

52. Kieffer, E. C.; Nolan, G. H.; Carman, W. J.; Sanborn, C. Z.; Guzman, R., and Ventura, A. Glucose tolerance during pregnancy and birth weight in a Hispanic population. Obstet Gynecol. 1999 Nov; 94(5 Pt 1):741-6.
Notes: No CBPR

53. Koopman, C.; Angell, K.; Turner-Cobb, J. M.; Kreshka, M. A.; Donnelly, P.; McCoy, R.; Turkseven, A.; Graddy, K.; Giese-Davis, J., and Spiegel, D. Distress, coping, and social support among rural women recently diagnosed with primary breast cancer. Breast J. 2001 Jan-2001 Feb 28; 7(1):25-33.
Notes: not relevant to intervention

54. Koopman, C.; Hermanson, K.; Diamond, S.; Angell, K., and Spiegel, D. Social support, life stress, pain and emotional adjustment to advanced breast cancer. Psychooncology. 1998 Mar-1998 Apr 30; 7(2):101-11.
Notes: No CBPR

55. Krieger, James; Allen, Carol; Cheadle, Allen; Ciske, Sandra; Schier, James K; Senturia, Kirsten, and Sullivan, Marianne. Using community-based participatory research to address social determinants of health: Lessons learned from Seattle Partners for Health Communities. Health-Education-and-Behavior. 2002; 29(3):361-382.
Notes: Review Article

56. Labonte, R. Health promotion and empowerment: reflections on professional practice. Health Educ Q. 1994 Summer; 21(2):253-68.
Notes: Review Article

57. Lai; McPhee/Jenkins, and Wong. Applying the quit and win contest model in the Vietnamese community in Santa Clara county. Tob Control. 2000.
Notes: Not relevant to intervention

58. LaMontagne, A. D. and Needleman, C. Overcoming practical challenges in intervention research in occupational health and safety. American Journal of Industrial Medicine. 1996 Apr; 29(4):367-72.
Notes: No CBPR

59. Lantz, P. M. ; Viruell-Fuentes, E.; Israel, B. A.; Softley, D., and Guzman, R. Can communities and academia work together on public health research? Evaluation results from a community-based participatory research partnership in Detroit. J Urban Health. 2001 Sep; 78(3):495-507.
    Notes: Process evaluation

60. Laurell, A. C.; Noriega, M.; Martinez S, and Villegas, J. Participatory research on workers' health. Social Science & Medicine. 1992 Mar; 34(6):603-13.
    Notes: Location

61. Lemkau, J. P.; Ahmed, S. M., and Cauley, K. "The history of health in Dayton": a community-academic partnership. Am J Public Health. 2000 Aug; 90(8):1216-7.
    Notes: Report on forum

62. Lew, R.; Moskowitz, J. M.; Wismer, B. A.; Min, K.; Kang, S. H.; Chen, A. M., and Tager, I. B. Correlates of cigarette smoking among Korean American adults in Alameda County, California. Asian Am Pac Isl J Health. 2001 Winter-2002 Spring; 9(1):49-60.
    Notes: not relevant to intervention

63. Lew, R.; Tanjasiri, S. P.; Kagawa-Singer, M., and Yu, J. H. Using a stages of readiness model to address community capacity on tobacco control in the Asian American and Pacific Islander community. Asian Am Pac Isl J Health. 2001 Winter-2002 Spring; 9(1):66-73.
    Notes: not relevant to information

64. Lindqvist, K.; Timpka, T., and Schelp, L. Ten years of experiences from a participatory community-based injury prevention program in Motala, Sweden. Public Health. 1996 Nov; 110(6):339-46.
    Notes: location

65. Malekoff, Andrew. Action research: An approach to preventing substance abuse and promoting social competency. Health-and-Social-Work. 1994; 19(1):46-53.
    Notes: no research

66. McGovern, T. F. Vulnerability: reflection on its ethical implications for the protection of participants in SAMHSA programs. Ethics & Behavior. 1998; 8(4):293-304.
    Notes: review article

67. McPhee, S. J.; Nguyen, T.; Euler, G. L.; Mock, J.; Wong, C.; Lam, T.; Nguyen, W.; Nguyen, S.; Huynh Ha, M. Q.; Do, S. T., and Buu, C. Successful promotion of hepatitis B vaccinations among Vietnamese-American children ages 3 to 18: results of a controlled trial. Pediatrics. 2003 Jun; 111(6 Pt 1):1278-88.
    Notes: Not relevant to intervention

68. Metzler, M. M.; Higgins, D. L.; Beeker, C. G.; Freudenberg, N.; Lantz, P. M.; Senturia, K. D.; Eisinger, A. A.; Viruell-Fuentes, E. A.; Gheisar, B.; Palermo, A. G., and Softley, D. Addressing urban health in Detroit, New York City, and Seattle through community-based participatory research partnerships. Am J Public Health. 2003 May; 93(5):803-11.
    Notes: Review article

69. Moir, S. and Buchholz, B. Emerging participatory approaches to ergonomic interventions in the construction industry. American Journal of Industrial Medicine. 1996 Apr; 29(4):425-30.
    Notes: insufficient information

70. Moos, R. H.; King, M. J.; Burnett, E. B., and Andrassy, J. M. Community residential program policies, services, and treatment orientations influence patients' participation in treatment. Journal of Substance Abuse. 1997; 8171-87.
    Notes: review article

71. Morrison, B. and Lilford, R. How can action research apply to health services?. Qualitative Health Research. 2001 Jul; 11(4):436-49.
    Notes: No CBPR

72. Murray, D. M.; Clark, M. H., and Wagenaar, A. C. Intraclass correlations from a community-based alcohol prevention study: the effect of repeat observations on the same communities. J Stud Alcohol. 2000 Nov; 61(6):881-90.
    Notes: not relevant to intervention

73. Nelson, G.; Ochocka, J.; Griffin, K., and Lord, J. "Nothing about me, without me": participatory action research with self-help/mutual aid organizations for psychiatric consumer/survivors. Am J Community Psychol. 1998 Dec; 26(6):881-912.
Notes: review article

74. Nelson, G.; Prilleltensky, I., and MacGillivary, H. Building value-based partnerships: toward solidarity with oppressed groups. American Journal of Community Psychology. 2001 Oct; 29(5):649-77; ISSN: review article.
Notes: Review Article

75. Nguyen, T. T.; McPhee, S. J.; Nguyen, T.; Lam, T., and Mock, J. Predictors of cervical Pap smear screening awareness, intention, and receipt among Vietnamese-American women. Am J Prev Med. 2002 Oct; 23(3):207-14.
Notes: not relevant to intervention

76. Nyamathi, A. M.; Lewis, C.; Leake, B.; Flaskerud, J., and Bennett, C. Barriers to condom use and needle cleaning among impoverished minority female injection drug users and partners of injection drug users. Public Health Rep. 1995 Mar-1995 Apr 30; 110(2):166-72.
Notes: No CBPR

77. O'Fallon; Tyson, and Dearry. Improving public health through community based participatory research and outreach. Environment Epidemol Toxicol. 2000; 2:201-209.
Notes: Review Article

78. O'Fallon, L. R.; Collman, G. W., and Dearry, A. The National Institute of Environmental Health Sciences' research program on children's environmental health. J Expo Anal Environ Epidemiol. 2000 Nov-2000 Dec 31; 10(6 Pt 2):630-7.
Notes: REVIEW ARTICLE

79. O'Fallon, L. R. and Dearry, A. Commitment of the National Institute of Environmental Health Sciences to community-based participatory research for rural health. Environ Health Perspect. 2001 Jun; 109 Suppl 3:469-73.
Notes: Review Article

80. Community-based participatory research as a tool to advance environmental health sciences. Environmental Health Perspectives. 2002 Apr; 110 Suppl 2:155-9.
Notes: Review Article

81. Oliver, S.; Milne, R.; Bradburn, J.; Buchanan, P.; Kerridge, L.; Walley, T., and Gabbay, J. Involving consumers in a needs-led research programme: a pilot project. [see comments.]. Health Expectations. 2001 Mar; 4(1):18-28.
Notes: Locations

82. Paine-Andrews, A.; Harris, K. J.; Fawcett, S. B.; Richter, K. P.; Lewis, R. K.; Francisco, V. T.; Johnston, J., and Coen, S. Evaluating a statewide partnership for reducing risks for chronic diseases. Journal of Community Health. 1997 Oct; 22(5):343-59.
Notes: process evaluation

83. Pellow, David N. Popular Epidemiology and Environmental Movements: Mapping Active Narratives for Empowerment. Humanity-and-Society. 1997; 21(3):Aug, 307-321.
Notes: no CBPR

84. Plough, A. and Olafson, F. Implementing the Boston Healthy Start Initiative: a case study of community empowerment and public health. Health Educ Q. 1994 Summer; 21(2):221-34.
Notes: NO RESEARCH

85. Reardon; Walsh; Kreiswirth, and Forester. Participatory action research from the inside: community development practice in East St. Loius. Am Sociol. 1993.
Notes: Review Article

86. Richardson, M. How we live: participatory research with six people with learning difficulties. Journal of Advanced Nursing. 2000 Dec; 32(6):1383-95.
Notes: location

87. Rodriguez, R. The power of the collective: battered migrant farmworker women creating safe spaces. Health Care for Women International. 1999 Jul-1999 Aug 31; 20(4):417-26; ISSN: no CBPR.
Notes: No CBPR

88. Sarri, Rosemary C. and Sarri, Catherine M. Organizational and Community Change through Participatory Action. Administration-in-Social-Work. 1992; 16(3-4):99-122.
Notes: Not research

89. Savitz; Arbuckle; Kaczor, and Curtis. Male Pesticide and pregnancy outcomes. Am J Epidemiol. 1997.
Notes: No CBPR

90. Schulz; Williams; Israel, and Lempert. Racial and spatial relationships as fundamantal determinants of health in Detroit. Milbank Quarter. 2002.
Notes: not revelevant to intervention

91. Secker-Walker; Gnich, and Platt. Cochrane Review: Community interventions for reducing smoking among adults. Cochrane Library . 2002; (4).
Notes: No CBPR

92. Sowden and Arblaster. Cochrane Review: Community interventions for preventing smoking in young people. Cochrane Library. 2002; (4).
Notes: No CBPR

93. Stebbins, M. W. and Snow, C. C. Processes and payoffs of programmatic action research. [Review] [22 refs]. Journal of Applied Behavioral Science. 1982; 18(1):69-86.
Notes: Not health

94. Stein, B. D. ; Kataoka, S.; Jaycox, L. H.; Wong, M.; Fink, A.; Escudero, P., and Zaragoza, C. Theoretical basis and program design of a school-based mental health intervention for traumatized immigrant children: a collaborative research partnership. Journal of Behavioral Health Services & Research. 2002 Aug; 29(3):318-26.
Notes: professional development

95. Steuart GW. Social and cultural perspectives: community intervention and mental health. Health Educ Q. 1993.
Notes: Review article

96. Stoecker and Bonacich. Why Participatory Research? Guest Editors' Introduction. Am Sociol. 1992.
Notes: Review article

97. Stoecker and Stuber. Participatory Reseach, PT. II. Am Sociol. 1993.
Notes: Review article

98. Suderman, E. M.; Deatrich, J. V.; Johnson, L. S., and Sawatzky-Dickson, D. M. Action research sets the stage to improve discharge preparation. Pediatric Nursing. 2000 Nov-2000 Dec 31; 26(6):571-6.
Notes: Nursing participatory research

99. Sullivan; Kone; Senturia, and Chrisman. History of community-based research in Seattle. Health Educ. in progress.
Notes: review article

100. Researcher and researched- community perspectives: Toward bridging the gap. Health Educ. 1993.
Notes: review article

101. Tasa, K.; Baker, G. R., and Murray, M. Using patient feedback for quality improvement. Quality Management in Health Care. 1996 Winter; 4(2):55-67.
Notes: No CBPR

102. Travers. Reducing inequities through participatory research and community empowerment. Health Educ. 1997.
Notes: No CBPR

103. Turner-Cobb/ /Sephton and Koopman. Social support and salivary cortisol in women with metastatic breast cancer. Psychosomatic Med. 2000.
Notes: not relevant to information

104. Turner, N. H.; O'Dell, K. J.; Weaver, G. D.; Ramirez, G. Y., and Turner, G. Community's role in the promotion of recovery from addiction and prevention of relapse among women: an exploratory study. Ethnicity & Disease. 1998 Winter; 8(1):26-35.
Notes: No CBPR

105. Wallerstein, N. A participatory evaluation model for Healthier Communities: developing indicators for New Mexico. Public Health Rep. 2000 Mar-2000 Jun 30; 115(2-3):199-204.
Notes: insufficient information

106. Power between evaluator and community: research relationships within New Mexico's healthier communities. Social Science & Medicine. 1999 Jul; 49(1):39-53.
Notes: no study

107. Powerlessness, empowerment, and health: implications for health promotion programs. Am J Health Promot. 1992 Jan-1992 Feb 28; 6(3):197-205.
Notes: No study

108. Wallerstein, N. and Bernstein, E. Introduction to community empowerment, participatory education, and health. Health Educ Q. 1994 Summer; 21(2):141-8.
Notes: no study/insufficient information

109. Walters, S. and East, L. The cycle of homelessness in the lives of young mothers: the diagnostic phase of an action research project. Journal of Clinical Nursing. 2001 Mar; 10(2):171-9.
Notes: location

110. West, B. J. ; Brockman, S. J., and Scott, A. Action research and standards of care. The prevention and treatment of pressure sores in elderly patients. Health Bulletin. 1991 Nov; 49(6):356-61.
Notes: No CBPR

111. Willms, D.; Bhatia, R.; Lowe, J.; Niemi, F.; Stewart, D., and Westmoreland-Traore, J. Five conversations: reflections of stakeholders on the impact of the ethnocultural communities facing AIDS study. Canadian Journal of Public Health. Revue Canadienne De Sante Publique. 1996 May-1996 Jun 30; 87 Suppl 1:S44-8, S49-53.
Notes: process evaluation

112. Young, L. E. and Jillings, C. R. Qualitative methods add quality to cardiovascular science. Can J Cardiol. 2000 Jun; 16(6):793-7.
Notes: no research

Appendix A
Exact Search Strings

Exact Search Strings

Medline

CBPR Definitions <1966 to October Week 5 2002>

Citations: 1-106

1 (community based participatory research or cbpr).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (25)
2 (participatory research or action research or participatory action research or participatory evaluation or community driven research or action cience or collaborative inquiry or empowerment evaluation).mp. (775)
3 1 or 2 (781)
4 limit 3 to english language (735)
5 limit 4 to yr=1970-2002 (728)
6 (definition or defined or operationalized or concept).mp. (270565)
7 5 and 6 (51)
8 from 7 keep 1-51 (51)
9 essential elements.mp. (918)
10 5 and 9 (2)
11 characteristics.mp. (256291)
12 5 and 11 (28)
13 characterization.mp. (158371)
14 5 and 13 (6)
15 exp Benchmarking/ or best practices.mp. (2948)
16 5 and 15 (3)
17 exp HEALTH PLANNING GUIDELINES/ or guidelines.mp. or exp GUIDELINES/or exp PRACTICE GUIDELINES/ (72227)
18 5 and 17 (21)
19 7 or 10 or 12 or 14 or 16 or 18 (106)

Grants <1966 to October Week 5 2002>

Citations: 1-18

1 (community based participatory research or cbpr).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (25)
2 (participatory research or action research or participatory action research or participatory evaluation or community driven research or action science or collaborative inquiry or empowerment evaluation).mp. (775)
3 1 or 2 (781)
4 limit 3 to english language (735)
5 limit 4 to yr=1970-2002 (728)
6 exp Financing, Organized/ or grants.mp. or exp Research Support/ or funders.mp. or exp Organizations, Nonprofit/ (143381)
7 exp FOUNDATIONS/ (3079)
8 exp Research Support/ or exp Financing, Organized/ or exp Foundations/ or grant-making.mp. (136115)
9 6 or 7 or 8 (143381)
10 5 and 9 (18)
11 "Support, U.S. Gov't, P.H.S."/ (0)
12 "Support, U.S. Gov't, P.H.S."/ (0)
13 from 10 keep 1-18 (18)

Medline	
	Focused Research <1966 to October Week 5 2002>
	Citations: 1-85 1 (community based participatory research or cbpr).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (25) 2 (participatory research or action research or participatory action research or participatory evaluation or community driven research or action science or collaborative inquiry or empowerment evaluation).mp. (775) 3 1 or 2 (781) 4 limit 3 to english language (735) 5 limit 4 to yr=1970-2002 (728) 6 exp RESEARCH/ (373152) 7 exp health services research/ (45193) 8 6 or 7 (412661) 9 5 and 8 (368) 10 exp Epidemiologic Methods/ (1804128) 11 exp Randomized Controlled Trials/ or exp Research Design/ or exp Clinical Trials/ (266464) 12 5 and 11 (91) 13 limit 5 to randomized controlled trial (16) 14 12 or 13 (106) 15 outcomes.mp. or exp "OUTCOME ASSESSMENT (HEALTH CARE)"/ or exp "OUTCOME AND PROCESS ASSESSMENT (HEALTH CARE)"/ or exp TREATMENT OUTCOME/(220882) 16 5 and 15 (103) 17 from 16 keep 1-103 (103) 18 14 not 17 (85) 19 from 18 keep 1-85 (85)

Medline	
	Outcomes <1966 to October Week 5 2002>
	Citations: 1-103 1 (community based participatory research or cbpr).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (25) 2 (participatory research or action research or participatory action research or participatory evaluation or community driven research or action science or collaborative inquiry or empowerment evaluation).mp. (775) 3 1 or 2 (781) 4 limit 3 to english language (735) 5 limit 4 to yr=1970-2002 (728) 6 exp RESEARCH/ (373152) 7 exp health services research/ (45193) 8 6 or 7 (412661) 9 5 and 8 (368) 10 exp Epidemiologic Methods/ (1804128) 11 exp Randomized Controlled Trials/ or exp Research Design/ or exp Clinical Trials/ (266464) 12 5 and 11 (91) 13 limit 5 to randomized controlled trial (16) 14 12 or 13 (106) 15 outcomes.mp. or exp "OUTCOME ASSESSMENT (HEALTH CARE)"/ or exp "OUTCOME AND PROCESS ASSESSMENT (HEALTH CARE)"/ or exp TREATMENT OUTCOME/(220882) 16 5 and 15 (103) 17 from 16 keep 1-103 (103)

Medline

Other Research <1966 to October Week 5 2002>

Citations: 1-200
1 (community based participatory research or cbpr).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (25)
2 (participatory research or action research or participatory action research or participatory evaluation or community driven research or action science or collaborative inquiry or empowerment evaluation).mp. (775)
3 1 or 2 (781)
4 limit 3 to English language (735)
5 limit 4 to yr=1970-2002 (728)
6 exp RESEARCH/ (373152)
7 exp health services research/ (45193)
8 6 or 7 (412661)
9 5 and 8 (368)
10 exp Epidemiologic Methods/ (1804128)
11 exp Randomized Controlled Trials/ or exp Research Design/ or exp Clinical Trials/ (266464)
12 5 and 11 (91)
13 limit 5 to randomized controlled trial (16)
14 12 or 13 (106)
15 outcomes.mp. or exp "OUTCOME ASSESSMENT (HEALTH CARE)"/ or exp "OUTCOME AND PROCESS ASSESSMENT (HEALTH CARE)"/ or exp TREATMENT OUTCOME/(220882)
16 5 and 15 (103)
17 from 16 keep 1-103 (103)
18 14 not 17 (85)
19 from 18 keep 1-85 (85)
20 9 not 14 (274)
21 20 not 16 (225)

Pre-1970s <1966 to January Week 2 2003>

Citations: 1-5
1 (community based participatory research or cbpr).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (27)
2 participatory research or action research or participatory action research or participatory evaluation or community driven research or action science or collaborative inquiry or empowerment evaluation).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (775)
3 1 or 2 (781)
4 limit 3 to english language (734)
5 limit 4 to yr=1902-1969 (5)
6 from 5 keep 1-5 (5)

Medline	
	Author Searches
	Allen, A (4) Bird, M (1) Freeman, E (2) Hatch, J (12) Jones-Saumty, D (7) Lubic, R (37) Tsark (4) Bass, E B (4) Bruce, T (5) Citrin, T (5) Cunningham, W (6) Fraticelli, B (1) Ford, J (6) Geiger, J (1) Glasgow, R E (18) Israel, B A (10) Kahn, R (1) Levine, D (27) Lurie, N (17) Manson, S M (22) Minkler, M (11) Ramirez-Valles (9) Randolph, L (7) Rubin, V (1) Sabol, B J (4) Seifer, S (18) White, G (3) Whitehead, T L (3)

Medline	
TEAG Call Suggestions	Jason Powell <1966 to February Week 3 2003> # Search History Results Display 1 powell j$.au. - 1369 2 exp mental health - 7598 3 1 and 20 - 0
TEAG Call Suggestions	Disabled Community <1966 to February Week 3 2003> Citations: 1-187 1 exp Disabled Persons/ and exp Consumer Participation/ (443) 2 exp united states/ (685785) 3 1 and 2 (187) 4 from 3 keep 1-187 (187)
TEAG Call Suggestions	James Taylor- East Boston <1966 to February Week 3 2003> Citations: 1-5 1 taylor j$.au. (4017) 2 exp Community Health Centers/ (5375) 3 1 and 2 (5)
TEAG Call Suggestions	Occupational Health and Community <1966 to February Week 3 2003> Citations: 1-59 1 michaels d$.au. (82) 2 exp WORKPLACE/ or exp Occupational Health Services/ or exp Occupational Diseases/ (80878) 3 1 and 2 (14) 4 from 3 keep 1-14 (14) 5 participation or participatory or community).mp. [mp=title, abstract, cas registry/ec number word, mesh subject heading] (136235) 6 2 and 5 (1425) 7 exp united states/ (685785) 8 6 and 7 (412) 9 exp HEALTH SERVICES RESEARCH/ or exp RESEARCH/ (402905) 10 8 and 9 (59) 11 from 10 keep 1-59 (59)

Medline	
TEAG Call Suggestions	James Taylor- Ear Infections <1966 to February Week 3 2003>
	Citations: 1-16 1 taylor j$.au. (4017) 2 exp Community Health Centers/ (5375) 3 1 and 2 (5) 4 boston.in. (92574) 5 1 and 4 (62) 6 3 and 4 (0) 7 east boston.in. (33) 8 1 and 7 (0) 9 exp EAR DISEASES/ or exp EAR/ (109870) 10 1 and 9 (16) 11 from 10 keep 1-16 (16)
TEAG Call Suggestions	Rehab Review <1966 to February Week 3 2003>
	1 exp REHABILITATION/ or exp REHABILITATION NURSING/ or exp REHABILITATION CENTERS/ or exp REHABILITATION, VOCATIONAL/ (136504) 2 exp Consumer Participation/ (18041) 3 1 and 2 (825) 4 exp united states/ (685785) 5 3 and 4 (213) 6 limit 5 to review articles (9) 7 from 6 keep 1-9 (9)
TEAG Call Suggestions	Rehab Research <1966 to February Week 3 2003>
	Citations: 1-37 1 exp REHABILITATION/ or exp REHABILITATION NURSING/ or exp REHABILITATION CENTERS/ or exp REHABILITATION, VOCATIONAL/ (136504) 2 exp Consumer Participation/ (18041) 3 1 and 2 (825) 4 exp united states/ (685785) 5 3 and 4 (213) 6 limit 5 to review articles (9) 7 from 6 keep 1-9 (9) 8 exp research/ or exp health services research/ (402905) 9 5 and 8 (37) 10 from 9 keep 1-37 (37)
TEAG Call Suggestions	David Michaels <1966 to February Week 3 2003>
	Citations: 1-14 1 michaels d$.au. (82) 2 exp WORKPLACE/ or exp Occupational Health Services/ or exp Occupational Diseases/ (80878) 3 1 and 2 (14) 4 from 3 keep 1-14 (14)

Medline	
TEAG Call Suggestions	Valles
	Citations: 1-6 Randy Stroecker
TEAG Call Suggestions	Glenn White
TEAG Call Suggestions	Barbara Isreal

SOCIOFILE	
	Citations: 1-45 Community based participatory research or cbpr or (("community based participatory") or ("community driven" or "collaborative inquiry")) and(research)
	Citations: 0 Randy Stroecker

PSYCHINFO	
	Citations: 1-76 Community based participatory research or cbpr or ((action research) in DE) and (community or empowerment or participation) and (health or medical or medicine)
	Citations: 1-23 Phil Brown
	Citations: 0 Randy Shaw
	Citations: 1-11 Mikkelsen
	Citations: 2 Stoecker-Randy in AU1 AU: Stoecker,-Randy

COCHRANE	
	Citations: 1-3 Cochrane Reviews: Community based participatory research
	Citations: 1 Cochrane Health Technology Assessment
	Citations: 1-12 Empowerment
	Citations: 1-176 Community Action Research (176)

Appendix B
Sample Abstraction Forms/ Quality Rating Forms

Sample Abstraction Form for Definition Articles

	Not specific	**Identify issues And concerns**	**Study design And funding**	**Participant Recruitment and Retention**	**Measures And Data Collection**	**Intervention Design And Implementation**	**Data analysis, Interpretation And Dissemination**	**Partnership Structure**
Essential Elements Of community Participation								
Essential Elements Of research								
Characteristics Of Best Practices								
Expected outcomes From community Perspective								
Expected outcomes From research Perspective								

Draft Evidence Table Headings for Research Components

1	2	3	4	5	6	7	8	9
Study ID, Authors,[a] Funder, Funding Period, Study Name (If applicable)	**Research Objectives[b]**	**Study Design[c], Duration, Setting[d]**	**Intervention[e]**	**Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate[f]**	**Primary Outcome Variables Measured[g]** **Data Collection Methods[h]**	**Other Variables Measured[i]**	**Intended and Unintended Effects of Intervention[j]**	**Evidence of enhanced or diminished research quality due to CBPR[k]**
Publications: Funder: Funding Period: Study Name:	Research Objective:	Study Design: Duration: Setting:	Intervention: Duration:	Participants: Sampling Strategy: Sample Size: Response Rate at Each Measure: Retention Rate:	Primary Variables Measured: Data Collection Methods:	Other variables measured:	Intervention Effects:	Methodology Measures Recruitment Intervention Dissemination Outcomes

* Primary article for this study

Draft Evidence Table Headings for Community-Based, Participatory Components

10	11	12	13	14	15	16	17
Study ID, Authors	**Duration and Nature of Community Involvement[lm]**	**Evidence of shared decision-making between researchers and the community[n]**	**Evidence that study is designed to remove prior barriers to research participation[o]**	**Evidence that socio-economic determinants of health are addressed[p]**	**Evidence that the research team was flexible to community needs and priorities during research implementation[q]**	**Evidence that the research effort contributed to individual or community capacity building[r]**	**Evidence that the research findings were used or intended to be used to address the original health concern:** • **dissemination of findings to participants** • **application of findings to a health-related intervention or policy change[s]** • **sustainability of research-related interventions in the community**

[a] Should be first and second author, et al. if applicable, and year (i.e. Smith, Jones et al., 1995). Put a star against the major publication for this study (the one that reports findings for the major research question. If you are not sure which the major publication is, or if there appears to be more than one, make a note in this column so that the senior reviewer can make a decision. Add the names of all other publications for the study from which you draw information that enters the evidence table. For the date, list the years given. For punctuation, list each study of a set with space between.

[b] Check for differences in the research objectives across articles in sets. If there is a difference, make a notation of it here and mark in the article where the different statements occur.

[c] Report study design as given. For study design, include only design (i.e. quasi-experimental), not methodology (i.e. survey). Types of study designs are suggested in the table below. This is not an exhaustive guide – there are other variants and hybrid designs that this table does not cover – check with your senior reviewer if you have questions. Enter appropriate key words from columns 1 and 2 for study design, ie, type of design (1), type of design (2) and allocation of participants (e.g., quasi-experimental design, pre- and post-test measures, snowball sample). Enter additional notes if the study is an RCT, or if the allocation of the intervention differs from the selection of the intervention and control groups. Data collection methods may be qualitative and/or quantitative under any of these categories, but these are reported under column 6. Type of sampling (systematic, snowball, etc, is reported in column 5 under sampling strategy, but is included in the table below for clarification.

TYPES OF STUDY DESIGNS

1	**2**	**3**	**5**
Type of design (1)	**Type of design (2)**	**Allocation of participants to control and intervention**	**Additional notes of explanation**
Experimental	Pre- and post-test measures	Probability sample - random allocation of treatment at baseline, same participants at baseline and follow-up Types of probability samples: 1. Simple random sample – equal chance of getting selected. 2. Systematic sampling- every nth person 3. Stratified sampling – the population is divided into strata, from which further selection is done using either simple random sampling or systematic sampling. 4. Multi-stage cluster – divide the area into progressively smaller areas, using a method of selection at each stage.	The key is the randomization of communities or individuals –this makes the intervention and control groups equivalent because all differences between the groups can be explained by chance. **If the study is an RCT (randomized controlled trial), make a note of it.** The participants may or may not be crossed over from one treatment group to another**. Also make a note if it is a crossover trial.**
Experimental	Post-test measures only	Probability sample - random allocation of treatment at intervention	Sometimes prestest values cannot be measured, or do not make sense to measure – (e.g., measures before an emergency room visit when intervention is provided in the emergency room). Still requires random assignment to intervention and control groups
Quasi-experimental	Pre- and post-test measures	Non random allocation of treatment,	All quasi-experimental designs lack random

		same participants at baseline and follow-up. Types of non-probability samples 1. Purposive, e.g., key informant surveys 2. Quota, e.g., age/race/marital status samples 3. Convenience, e.g., mall surveys 4. Snowball, ie, participants refer others to study 5. Self-selection, e.g., web polls 6. Case-control (matched participants in intervention and control groups on key variables)	assignment. There are many different types – some are better able to address the nonequivalence of the groups than others. In this particular version, even though the treatment groups are nonequivalent (non-random allocation), the pretest measures account for differences between intervention and control groups before the intervention. Although the treatment (intervention vs. control) is non-randomly allocated, there may be studies in which the study groups are randomly selected (think Wai'anae). If so, **note that the study participants are selected randomly, while the intervention is non randomly allocated**. Random selection of study participants with non-random allocation of treatment can sometimes buy additional validity – see *separate pre and post samples design* below.
Quasi-experimental	Proxy Pretest and post-test (Proxy pretest based on recall, collected at post-test)	Non random allocation of treatment	Groups are non-equivalent, and measurement is conducted only at post-test. Pretest measures are collected at the same time, and often rely on recall. Although a flawed design for measuring 'objective' changes, this design works for tests of changes in participants' own perceptions.
Quasi-experimental	Regression Point Displacement (RPD) Design	Non random allocation of treatment, same participants at baseline and follow-up	This design is sometime used in community interventions. Instead of comparing the intervention community with a single control community, data are pooled from heterogeneous set of nonequivalent communities to model the comparison condition
Quasi-experimental	Separate Pre-Post Samples Design	Non-random allocation of treatment, different participants at baseline and follow-up. The strongest variant of this approach has random selection of pre and post test groups in each of the treatment groups. In other words, pre and posttest groups should be comparable, within the intervention group and within the control group.	Sometimes, when interventions are applied in the service setting, clients may cycle through the agency, making it difficult to recruit the same people for pre- and post-tests. In this design, the 4 groups are different (pretest intervention, pretest control, posttest intervention, posttest control)
Pre-experimental	One group post-test only	Non-random allocation of treatment	Note that this category has much stigma

			associated with it.
Pre-experimental	Post-test only for intervention and control groups	Non random allocation of treatment	This design relies on group differences alone to measure the effect of the intervention, and does not account for nonequivalence at baseline –this design is sometimes used when the intervention has been implemented before the research design is worked out.
Pre-experimental	One group pretest-posttest design	Non random allocation of treatment, same participants at baseline and follow-up	No control group

From Cook and Campbell 1979 (Quasi-experimentation), William Trochim's website on quasi-experimentation and numerous other websites.

[d] Describe the intervention as planned by researchers. Include length of intervention in this column.

[e] For duration, include duration of intervention here. Report setting as the geographical location (column 4) and participant information (column 5) as the community studied, with as much detail as possible for each.

[f] Report the sample size for each phase of measurement. Report the numerator and denominator with percentages when given. If the study reports a response rate, enter that information for each measure separately, ie, for baseline, follow-up 1, follow-up 2, etc. Report the retention rate between baseline and last measure.

[g] Report primary variables measured, as they relate to the research question.

[h] This is where to report methods such as telephone survey, focus groups, etc.

[i] These would be the other variables measured, perhaps during a phase of a study, or a subgroup, prevalence rates, demographics, knowledge, attitudes, etc. If the intervention is complete, and there is little relevant information in this column, you may just list the topics (race, income, etc).

In the case of completed interventions, this column should report variables that are theoretical determinants of the intervention effects, but are not the final outcome. (For instance, the intervention may be designed to cause changes in breast and cervical cancer screening rates, reported in Column 8. However, the intervention may have produced effects on knowledge and beliefs - theoretical determinants of screening rates – these should be reported in Column 7 for completed interventions).

If this is an incomplete intervention or an observational study, other variables are those related to the study objective. In this case, please provide sufficient detail on these findings to judge whether the objective was met.

[j] Intervention effects address the research question. Provide sufficient detail to assess whether the study has answered the research question. Include p values where relevant. Do include unintended effects of the intervention where reported. Also, if studies have analyzed the link between the theoretical determinants and the outcome, do include it here (for instance, among women in the intervention group, those whose beliefs changed were more likely to get screened by x%, as compared to y% in the non-intervention group).

[k] Includes methodology, measures, recruitment, intervention and dissemination, as well as outcomes. Where CBPR has resulted in changes in methodology, measures, recruitment, intervention or dissemination. Make notes so that the reviewer will know whether your entries are based upon the text in the articles or on inferences you have made regarding enhanced or diminished quality.

[l] Nature of Community Involvement (can list as 1-10 if applicable, otherwise list each number)-

1. Selection of research question
2. Proposal development
3. Financial responsibility for grant funds
4. Study design
5. Recruitment and retention
6. Measurement instruments and data collection
7. Intervention development, implementation
8. Interpretation of Findings
9. Dissemination of findings
10. Application of findings to health concern identified

[m] Both the intention of the researchers and the reality at end of study, if reported

[n] This is a "how" response- give information on the structure or mechanism of shared decision-making. This is different from nature of involvement because can have one without the other, and both should be reported if given. NR will be a more common response than No. Give as much detail as possible.

[o] Evidence of the researchers' efforts to remove barriers and the community's willingness to act as a partner. Should be yes/no and description of evidence, with as much detail as possible.

[p] Yes/No and description of evidence, with as much detail as possible. Note whether the socio-economic determinants of health were just assessed or addressed as well through the research or design of the intervention.

[q] Yes/No and description of evidence with detail.

[r] Yes/No and description of evidence with detail. Research effort includes duration and purpose of continued funding if provided. Separate 'individual' from 'community' if possible.

[s] Duration is the length of the relationship between partners if given.

Quality Rating for CBPR Studies – Intervention Research

Primary Article (Author, Year): ____________________ Short Title: ___________________

Abstractors: _______________________ Manuscript #: __________________

Quality raters: ________________________ Date: ____________

Research Elements

- Rating scheme:
    - 3: Good
    - 2: Fair
    - 1: Poor/ IN – Insufficient information reported to determine
    - NA-Non Applicable

1. Research question

1a. ___ Clearly specified

2. Study Population and External validity

2a. ___ Study population adequately described

2b. ___ Study population appropriate to address stated research question

2c. ___ Study population representative of those to whom results might be generalized

2d. ___ Study population of adequate size to address research question

3. Control/Comparison group:

3a. ___ Randomized? (yes/no)

3b. ___ Comparability of participants pre intervention

3c. ____Loss to Follow up

4. Intervention/Exposure

4a. ____ Clearly described

4b ____ Intervention/exposure dose assessed

4b. ____ Feasible for implementation in larger population

4c. ____ Intervention delivered as planned (fidelity)

5. Internal validity/fidelity (O,I)

5a. ____ Clear distinction between comparison groups (avoidance of contamination, cross-over)

Primary outcome measures

5b.____ reflect research question

5c.____ clearly defined

5d._____ standardized

5e._____ valid, reliable

6. Statistical analysis

6a. ____ Intention to treat

6b.____ Appropriate for study design

6c.____ Appropriate control of confounding

7. Blinding

7a.____ Post intervention data collection (particularly interviews) blinded to study status

7b.____ Statisticians blinded to study status

8. Funding source

8a.____ Possible bias due to funding source (higher potential for bias receives score of 1)

Quality Rating for CBPR Studies – Observation/Epidemiologic Research

Primary Article (Author, Year): ____________________ Short Title: ___________________

Abstractors: _______________________ Manuscript #: __________________

Quality raters: ________________________ Date: ____________

Research Elements

- Rating scheme:
  - 3: Good
  - 2: Fair
  - 1: Poor/ IN – Insufficient information reported to determine
  - NA-Non Applicable

1. Research question

1. ___ Clearly specified

2. Study Population and External validity

2a. ___ Study population adequately described

2b. ___ Study population appropriate to address stated research question

2c. ___ Study population representative of those to whom results might be generalized

2d. ___ Study population of adequate size to address research question

3. Control/Comparison group:

3a. NA Randomized? (yes/no)
Study design: ____________

3b. ___ Comparability of participants at baseline

3c. ____Loss to Follow up

4. Intervention/Exposure

4a. ____ Clearly described

4b ____ Intervention/exposure dose assessed

4b. NA Feasible for implementation in larger population

4c. NA   Intervention delivered as planned (fidelity)

5. Internal validity/fidelity

5a. ____ Clear distinction between comparison groups (avoidance of contamination, cross-over)

Primary outcome measures

5b.____   reflect research question

5c.____   clearly defined

5d._____ standardized

5e._____ valid, reliable

6. Statistical analysis

6a. _NA Intention to treat

6b.____ Appropriate for study design

6c.____ Appropriate control of confounding

7. Blinding

7a. NA_ Post intervention data collection (particularly interviews) blinded to study status

7b.____   Statisticians blinded to study status

8. Funding source

8a.____   Possible bias due to funding source (higher potential for bias receives score of 1)

Quality Rating for CBPR Studies – Qualitative Research

Primary Article (Author, Year): ____________________ Short Title: ___________________

Abstractors: _______________________ Manuscript #: __________________

Quality raters: ________________________ Date: ____________

Research Elements

- Rating scheme:
  - 3: Good
  - 2: Fair
  - 1: Poor/ IN – Insufficient information reported to determine
  - NA-Non Applicable

1. Research question

1. ___ Clearly specified

2. Study Population and External validity

2a. ___ Study population adequately described

2b. ___ Study population appropriate to address stated research question

2c. ___ Study population representative of those to whom results might be generalized

2d. ___ Study population of adequate size to address research question

3. Data collection and analysis

3a. ____ Evidence of structured guide/instrument to guide interviews/focus groups/observations

3b.____ Socio-cultural fit of interviewer/ leader/observer with participants

3c.____ Documentation of interviews/observations

3d. ____ Systematic coding and analysis

4. Funding source

4.____ Possible bias due to funding source (higher potential for bias receives score of 1)

Quality Rating for Community-Based Participatory Elements of CBPR Study

Primary Article (Author, Year): ____________________ Short Title: ___________________

Reviewer: _______________________ Manuscript #: __________________

Rating scheme:

3 = Good
2 = Fair
1p = Poor
1in = Insufficient information reported to determine
NA = Not Applicable

1. Nature of Community Involvement

1a. ____ Selection of research question

1b. ____ Proposal development

1c. ____ Financial responsibility for grant funds

1d. ____ Study design

1e. ____ Recruitment and retention of study participants

1f. ____ Measurement instruments and data collection

1g. ____ Intervention development, implementation

1h. ____ Interpretation of findings

1i. ____ Dissemination of findings

1j. ____ Application of findings to health concern identified

1k. TOTAL number of community involvement factors rated 3, 2 or 1: _____

2. Evidence of Community-Based Participatory Research Elements:

2a. ____ Structure or mechanism for shared decision-making between researchers and the community

2b. ____ Study was designed to remove barriers to community participation in research

2c. Socio-economic determinants of health were:

    2ci ____ Assessed through design of the study or intervention

    2cii____ Addressed through design of the study or intervention

2d. ____ Research team was flexible to community needs and priorities during research implementation

2e. Study's duration and purpose contributed to:

    2ei ____ Individual capacity building

    2eii ____ Community capacity building

2f. Findings were either used or intended to be used to address the original health concerns with regard to:

    2fi. ____ Dissemination to participants

    2fii. ____ Application to a health related intervention or policy change

    2fiii. ____ Sustainability of research-related interventions in the community

Appendix C
Evidence Tables

Evidence Table Notes:

Appendix C consists of two evidence tables; the first includes 12 evaluated interventions and the second includes 18 interventions that were either not completed or not evaluated. Entries are sorted by study design and then listed alphabetically by their study names. When articles gave no "official" study names, we used the key focus of the study. Entries in the evidence table may combine information from multiple articles to provide more complete information on a given study. Each study has two separate entries; the first lists research components and the second lists community participation components. A list of abbreviations used in the tables appears at the beginning of the appendix.

Contents

Glossary of Abbreviations and Acronyms Used in Evidence Tables

Abbreviation/Acronym	Definition
AHA	American Heart Association
CAB	Community Advisory Board
CAC	Community Advisory Committee
CANAP	Citizen Alert Native American Program
CBO	Community-based organization
CBPR	Community-based participatory research
CDC	Centers for Disease Control and Prevention
CHA	Community Health Advisor
CHR	Community Health Representative
HEPA	High-efficiency particulate arresting
HIV	Human immunodeficiency virus
IPV	Intimate partner violence
KCAB	Korean Community Advisory Board
MI	Myocardial infarction
n	Number
NA	Not applicable
NCFP	North Carolina Farmworkers’ Project
NCI	National Cancer Institute
NIEHS	National Institute of Environmental Health Sciences
NR	Not reported
NY	New York
P	Probability
PAR	Participatory action research
RCT	Randomized controlled trial
SES	Socioeconomic status
VHW	Village Health Workers
WBJ	Workbook Journal
YANA	You Are Not Alone

Evidence Table 1.
Evaluated Interventions

Evidence Table 1. Communities Mobilizing for Change on Alcohol: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publication: Wagenaar AC, Murray DM, Gehan JP, et al., 2000* Wagenaar AC, Murray DM, Toomey TL, 2000 Wagenaar AC, Murray DM, et al., 1994 Wagenaar AC, Gehan JP, et al., 1999 Wagenaar AC, Toomey TL, et al., 1996 Wagenaar AC, Perry CL, 1994 Funder: National Institute on Alcohol Abuse and Alcoholism, Center for Substance Abuse Prevention Funding Period: 6 years (1991-1997) Study Name: The Communities Mobilizing for Change on Alcohol (CMCA)	Research Objective: To evaluate the effectiveness of a community-based intervention to reduce • The availability of alcohol to young people • Alcohol consumption for those under 21 • Injury, morbidity, health and social problems related to alcohol	Study Design: Experimental (RCT with pretest and posttest measures) Duration of Study: 5 years Setting: 15 school districts in Minnesota and Wisconsin	Intervention: Community organizers worked with local public officials, agencies, media, and merchants to change community policies toward alcohol through • Community enforcement actions • Community institutional policies • Community initiated regulations • Community information dissemination Duration of Intervention: 2.5 years

* Primary article for this study

Evidence Table 1. Communities Mobilizing for Change on Alcohol: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: • High school students (grades 9 and 12) • Youth, aged 18 to 20 • Alcohol retailers Sampling Strategy: Of 24 eligible communities, 15 agreed to participate then matched according to characteristics and randomly assigned to intervention or control groups High School Students: • 100% asked to participate Youth: • Random selection from state driver's license records Alcohol purchase attempts on-sale (bars, restaurants): • 60% randomly selected Alcohol purchase attempts off-sale (liquor stores, convenience stores, grocery stores): • 100% Alcohol merchant survey: • nearly identical to alcohol purchase attempt survey	Primary Variables Measured: Multiple variables on • Access to alcohol • Drinking behavior Data Collection Methods: Quantitative: • Baseline and follow-up school surveys after 3 years • Surveys of 18- to 20-year-olds • Alcohol purchase attempts • Alcohol merchant surveys • Media content analysis • Archival data using time series data on car crashes, arrests, etc.	Other Variables Measured: • Socio-demographic factors • Education • Characteristics of merchants	Intervention Effects: Community policies were changed to reduce youth access to alcohol Measures for access to alcohol and drinking behaviors generally declined after the intervention, although only 1 measure showed a statistically significant difference to the control group in a multiple regression model (18- to 20-year olds: provided alcohol to youth; *P* = 0.01) The authors report that there are significant overall effects for 18- to 20-year-olds and on-sale alcohol merchants measured in standard deviation units (*P* = 0.01, respectively *P* = 0.04)	Methodology: No Measures: No Recruitment: No Intervention: Yes Core leadership groups were founded to plan and implement the interventions Dissemination: Yes Strategy teams received data from time series and baseline surveys Outcomes: No Quality Rating: 2.65

Evidence Table 1. Communities Mobilizing for Change on Alcohol: Research Components (continued)

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Wagenaar AC, Murray DM, Gehan JP, et al., 2000*			
Wagenaar AC, Murray DM, Toomey TL, 2000			
Wagenaar AC, Murray DM, et al., 1994			
Wagenaar AC, Gehan JP, et al., 1999			
Wagenaar AC, Toomey TL, et al., 1996			
Wagenaar AC, Perry CL, 1994			
Continued			

Evidence Table 1. Communities Mobilizing for Change on Alcohol: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Sample Size: 1992/1995: High School: 9th: 5,858 12th: 4,506/4,487 18- to 20-year-olds: 3,095/1,721 Merchants: 502/556 Alcohol purchase attempts on-sale: 229/251 Alcohol purchase attempts off-sale: 273/305 Response Rate at Each Measure: Baseline/Followup High School: 9th: 92.8%/83.5% 12th: 89.3%/NA Youth: 92.5%/93.9% Merchants: 87.6%/91.5% Retention Rate: 62.8% for 1992 9th graders (this cohort not reported in analysis due to high loss of followup)				

Evidence Table 1. Communities Mobilizing for Change on Alcohol: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Publication: Wagenaar AC, Murray DM, Gehan JP, et al., 2000* Wagenaar AC, Murray DM, Toomey TL, 2000 Wagenaar AC, Gehan JP, et al., 1999 Wagenaar AC, Toomey TL, et al., 1996 Wagenaar AC, Murray DM, et al., 1994 Wagenaar AC, Perry CL, 1994	Duration: 5 years Nature of Community Involvement: • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified Quality Rating: 2.81	Yes 141 community residents participated in 7 CMCA strategy teams to provide leadership to the campaign; strategy teams developed work plans focusing on the special needs and preferences of the community	Yes 2,415 residents were involved as a “mass base” to support activities without participating in meetings and activities such as attending campaign events, communicating with public officials, and providing in-kind support

Evidence Table 1. Communities Mobilizing for Change on Alcohol: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Sociodemographics, alcohol access and use Addressed: Yes Intervention sought to change policies on alcohol access and use	Yes Plans of action varied across communities depending on the special needs and interests	Yes Members of the strategy teams developed skills in organizing through letter-writing, phone-calling, offering testimony, lobbying, public speaking, creating phone trees, producing mass mailings, presentations, building a data base, working with media, fundraising, conducting research, negotiating	Dissemination of Findings: Yes Strategy teams received results; dissemination of alcohol-related information major part of survey; organizers made 333 presentations to 2,048 people and generated 101 newspaper articles Application of Findings: Yes Changes in policies, procedures, and practices in the communities via • Alcohol merchants • Law enforcement • Community events • Hotels • Media • Treatment agencies • Religious venues • Criminal justice Sustainability: Yes Some strategy teams applied for further funding

Evidence Table 1. East Baltimore Health Promotion Program: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Morisky DA, Levine DM, et al., 1983* Levine DM, Becker DM, et al., 1992 Levine DM, Green LW, et al., 1979 Green LW, Levine DM, et al., 1975 Funder: National Heart, Blood, and Lung Institute Funding Period: NR Study Name: East Baltimore Health Promotion Program	Research Objective: To determine the effectiveness of a 3-staged health education program for hypertensive patients	Study Design: Experimental (RCT) Duration of Study: 5 years Setting: 34 census tract areas, East Baltimore	Intervention: • Exit interview to increase understanding of disease and compliance with prescribed regimen • Home visit to encourage a family member to provide support • Invitations to small group sessions Duration of Intervention: 2 months for each intervention

* Primary article for this study

Evidence Table 1. East Baltimore Health Promotion Program: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: High-risk, urban, mainly African-American, hypertensive patients Sampling Strategy: Probability: Sequential randomized, assignment at each intervention Sample Size: 400 Response Rate at Each Measure: 80% for followup interview Retention Rate: 290 (72.5%)	Primary Variables Measured: • Compliance • Weight control • Appointment record • Blood pressure • Mortality Data Collection Methods: Quantitative: Blinded review of medical records Home interview (followup)	Other Variables Measured: • Socioeconomic factors • Years of hypertension • Comorbidities • Number of hospitalizations	Intervention Effects: • Overall mortality was 57.3% less in the combined experimental groups compared to conventional group ($P < 0.5$) • Hypertension-related mortality was 53.2 % less in experimental group ($P < 0.01$) • Overall, intervention shows a positive effect on appointment keeping, weight control, and blood pressure	Methodology: No Measures: No Recruitment: No Intervention: Patient survey was used to tailor the intervention Dissemination: No Outcomes: No Quality Rating: 2.74

Evidence Table 1. East Baltimore Health Promotion Program: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Morisky DA, Levine DM, et al., 1983* Levine DM, Becker DM, et al., 1992 Levine DM, Green LW, et al., 1979 Green LW, Levine DM, et al., 1975	<u>Duration:</u> NR <u>Nature of Community Involvement:</u> • Selection of research question • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Application of findings to health concern identified <u>Quality Rating:</u> 2.81	Yes Initially a community advisory board directed efforts; eventually the partnership was enhanced to include churches, neighborhood and local grassroots organizations in a steering committee that coordinated the intervention Following a needs assessment, the interests of community leaders were taken into account to select hypertension and smoking as specific health status issues	Yes The intervention approaches were designed by community members to be sensitive to the culture and the needs of the specific groups in recognition of the fact that the urban African-American population is hard to reach

* Primary article for this study

Evidence Table 1. East Baltimore Health Promotion Program: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Sociodemographics, household composition Addressed: Yes One of the interventions focused on family education and support	Yes Intervention approaches were based on a comprehensive needs assessment and the results of a baseline study Intervention was designed by community members to be sensitive to the culture and the needs of the specific groups	Yes Over time, churches developed a large-scale prevention program ("Heart, Body, and Soul") Lay health workers with no previous health training were provided training according to American Heart Association (AHA) guidelines	Dissemination of Findings: No Application of Findings: Yes Experience served as a basis for a broader-based community program to control hypertension Sustainability of Interventions: Yes Steering committee developed leadership skills and resources to sustain the program

Evidence Table 1. Health is Gold!: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Lam TK, McPhee SJ, et al., 2003 Funder: CDC Funding Period: 4 years Study Name: Health is Gold! Vietnamese Community Health Promotion Project	Research Objective: To compare the effectiveness of a cervical cancer screening program using a media campaign and lay health workers to a program only using the media campaign	Study Design: Experimental (RCT) Duration of Study: Ongoing study Setting: Santa Clara County, California	Intervention: Lay health worker activities: • 2 90-minute sessions with presentations and discussions at baseline • 1 session after 2 months Duration of Intervention: 2 months

Evidence Table 1. Health is Gold!: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Vietnamese-American women Sampling Strategy: Nonprobability sample — each lay health worker recruited 20 women from her social networks Sample Size: 400 Response Rate at Each Measure: 100% Retention Rate: 100% after the intervention (10 dropped out before the intervention and were replaced)	Primary Variables Measured: • Awareness and knowledge of cervical cancer and Pap tests • Receipt or intention to receive a Pap test Data Collection Methods: Quantitative: Written questionnaires for intervention group, telephone survey for control group	Other Variables Measured: • Exposure to media education • Sociodemographic characteristics	Intervention Effects: Preliminary findings: • Percentage of women who had a Pap test increased significantly in the intervention group ($P < 0.001$) • Knowledge about cervical cancer and Pap tests increased in both groups	Methodology: No Measures: No Recruitment: Yes Each lay health worker recruited 20 women from her social network leading to a higher number of recruits, but also possible selection bias Intervention: Yes Media strategy refined based on community feedback; control group received a delayed intervention based on the input of the Coalition Dissemination: No Outcomes: No Quality Rating: 2.61

Evidence Table 1. Health is Gold!: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Lam TK, McPhee SJ, et al., 2003	Duration: 4 years Nature of Community Involvement: • Selection of research question • Proposal development • Financial responsibility for grant funds • Study design • Recruitment and retention • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified Quality Rating: 2.60	Researchers organized a coalition of 7 community-based organizations and 4 health agencies to meet monthly The Coalition established a one-member one-vote governance; coalition members formulated and implemented the project and monitored and modified the project as needed; researchers developed content, managed logistics, evaluated outcomes	Yes Participants were offered $30 or gift incentives Interviewers and lay health workers spoke Vietnamese

Evidence Table 1. Health is Gold!: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Sociodemographics, length of residence in the U.S. Addressed: Yes Program offered reduced-cost Vietnamese staffed Pap clinic	Yes Researchers instituted a delayed intervention for the control group based on coalition input Coalition members hosted community forums during the media campaign and used the information to refine existing media strategies and formulate new approaches	Yes Lay workers acquired health knowledge, organizational skills, and facilitation experiences Partner agencies developed capacities to conceptualize and organize lay health worker outreach Researchers developed the capacity to organize an effective coalition, develop intervention content, and formulate and implement protocols that meet both community and scientific standards	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: No, study ongoing

Evidence Table 1. Sierra Stanford Partnership: Research Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Publications: Angell KL, Kreshka MA, et al., 2003* Koopman C, Angell K, et al., 2001 Funder: Community Initiated Research Collaboration award from Breast Cancer Research Program Funding Period: NR Study Name: The Sierra Stanford Partnership	Research Objective: To develop and evaluate a low-cost, community-based workbook journal for improving psychosocial functioning in geographically and economically isolated women with primary breast cancer	Study Design: Experimental (RCT); pretest and posttest measure Duration of Study: 6 months Setting: 7 rural counties in the Sierra Nevada Foothills, California	Intervention: Community-initiated workbook-journal as a support group alternative Duration of Intervention: 3 months

* Primary article for this study

Evidence Table 1. Sierra Stanford Partnership: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Underserved rural women with primary breast cancer, either within 3 months of diagnosis or within 3 months of completing treatment Sampling Strategy: Simple random sample Sample Size: 100 Response Rate at Each Measure: NA Retention Rate: 98%	Primary Variables Measured: • Posttraumatic Stress Checklist • Profile of Mood States (mood disturbance) Data Collection Methods: Quantitative: Questionnaires and semi-structured interviews at baseline and follow-up (interviewers blinded at follow-up)	Determinants of Intervention Effects: • Coping (Mental Adjustment to Cancer Scale) • Demographic variables • Illness variables (stage, treatment) • Social support	Intervention Effects: • No significant differences between groups in primary outcome measures: - Posttraumatic Stress Disorder symptoms - Profile of Mood States • Emotional venting, mental disengagement • Women who were treated in rural centers and received the workbook journal showed increased fighting spirit compared to the control group ($P = 0.05$) • 74% of women felt emotionally supported by the workbook journal	Methodology: No Measures: No Recruitment: Yes Community partners took the lead, designing strategies to reduce women's fears about participating Intervention: Yes Community partners developed intervention Dissemination: No Outcomes: No Quality Rating: 2.83

Evidence Table 1. Sierra Stanford Partnership: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Angell KL, Kreshka MA, et al., 2003 Koopman C, Angell K, et al., 2001	Duration: Duration not reported Nature of Community Involvement: • Selection of research question • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Dissemination of findings Quality Rating: 1.80	Yes Community partners took lead in developing recruitment procedures and conducting assessment Local cancer support group was asked for input on the informed consent, which was altered to reduce potential anxieties about research	Yes Community partners took the lead in recruitment, designing strategies to reduce women's fears about participating Several personal contacts with participants before enrollment

Evidence Table 1. Sierra Stanford Partnership: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Addressed: No	Yes Flexibility with assessments to accommodate women's treatment schedules and provide a sense of control	Yes Community recruiters received training in research design	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: No

Evidence Table 1. HIV Testing and Counseling for Latina Women: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Flaskerud JH, Nyamathi AM, Gwen CU, 1997* Flaskerud JH, Nyamathi AM, 2000 Flaskerud JH, Nyamathi AM, 1996 Flaskerud JH, Uman G, Lara R, et al., 1996 Flaskerud JH, Calvillo ER, 1991 Funder: National Institute of Allergy and Infectious Disease Funding Period: NR Study Name: NR; study on HIV testing and counseling for Latina women	Research Objective: To assess the effectiveness of an HIV intervention program on the knowledge and practices of low-income Latina women	Study Design: Quasi-experimental Duration of Study: 6 years Setting: Los Angeles	Intervention: Psychoeducational prior to and 2 weeks after HIV antibody testing: • HIV test • Counseling • Free condoms • Skill development in condom use and cleaning needle • Pregnancy counseling • Referral and advocacy Duration of Intervention: 1 year

* Primary article for this study

Evidence Table 1. HIV Testing and Counseling for Latina Women: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR Quality Rating for Research Elements (Range 1-3)
Participants: Low-income Latina women Sampling Strategy: Nonprobability: Convenience Sample Size: 570 (intervention.) 51 (control) Randomly selected subsample of 200 after 1 year Focus group prior to program design: 59 Focus groups after program intervention: 51 Response Rate at Each Measure: 89% (508) Retention Rate: 2 weeks posttest: 98% 1 year retest of 200 random subsample: 96%	Primary Variables Measured: • Knowledge about HIV • Sexual risk behavior and practices Data Collection Methods: Quantitative: Structured interviews Qualitative: Focus groups prior to program design and after implementation of intervention	Other Variables Measured: • Self esteem • Acculturation • Sociodemo-graphics	Intervention Effects: Participants in the intervention group made significant improvements in HIV knowledge and reported condom use; comparison group did not make significant pretest and posttest improvements in these measures	Methodology: No Measures: No Recruitment: No Intervention: Intervention was based on focus groups and interviews with health workers Dissemination: No Outcomes: No Quality Rating: 1.78

Evidence Table 1. HIV Testing and Counseling for Latina Women: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participating Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Flaskerud JH, Nyamathi AM, Gwen CU, 1997* Flaskerud JH, Nyamathi AM, 2000 Flaskerud JH, Nyamathi AM, 1996 Flaskerud JH, Uman G, Lara R, et al., 1996 Flaskerud JH, Calvillo ER, 1991	Duration: NR Nature of Community Involvement: • Selection of research question • Financial responsibility for grant funds • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified Quality Rating: 2.15	Yes Focus groups and advisory board meetings helped to frame research questions, evaluate intervention protocols, and interpret studies	Yes Child care and snacks were provided during the interviews; interviewers shared ethnicity and spoke Spanish Educational materials reflected language and low literacy levels Participants reimbursed per interview

Evidence Table 1. HIV Testing and Counseling for Latina Women: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Limited sociodemographic information was assessed Addressed: No	Yes Women's hesitancy to get their blood drawn resulted in the decision to use finger-stick HIV antibody tests	Yes Community health workers received additional training and updates in HIV education A community resource directory was created	Dissemination of Findings: Results of program were published and presented at community conferences and workshops and scientific conferences Application of Findings: No Sustainability of Interventions: No

Evidence Table 1. Internet Access and Empowerment — A Community-Based Health Initiative: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Masi CM, Suarez-Balcazar Y, et al., 2003 Funder: U.S. Department of Commerce's Technology Opportunities Program; West Suburban Health Care Funding Period: 1999-2001 Study Name: Internet Access and Empowerment: A Community-Based Health Initiative	Research Objective: To determine whether access to health information via in-home Internet technology can positively influence empowerment among residents of a low-income urban community	Study Design: Quasi-experimental Duration of Study: NR Setting: 57-block area, West Side of Chicago	Intervention: • Internet access via WebTV • Training • Technical support • Access to a community-specific health-oriented Web page • Placement of public Internet access in 10 community locations Duration of Intervention: 1 year

Evidence Table 1. Internet Access and Empowerment — A Community-Based Health Initiative: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Community residents Sampling Strategy: Intervention group: From a pool of residents who had previously served as block leaders Control group: Neighbors of intervention group members identified randomly through geographical stratification and recruited by door-to-door canvassing Sample Size: Intervention group: 42 Control group: 93 Response Rate at Each Measure: NA Retention Rate: Intervention group: 60% (n = 25) Control group: 38% (n = 35)	Primary Variables Measured: Answers to a modified Perceived Control Scale, information technology proficiency, aptitude, and acceptance Data Collection Methods: Qualitative: Monthly telephone interviews Quantitative: Surveys at baseline and after 1 year	Other Variables Measured: • Demographic factors • Attitudes toward technology	Intervention Effects: • Internet can positively influence health-related empowerment (6 of 8 items significantly different between intervention and control groups, compared to 1 item at baseline) • Significant improvement of technology aptitude and acceptance in the intervention group • No diffusion of attitudes and skills within the community	Methodology: Yes Community residents were involved during the development of the study; advisory board was formed in the community; monthly phone interviews Measures: NR Recruitment: Yes Intervention group was recruited from community leaders Intervention: Yes Decision to partner with block leaders was made after discussion with the community Dissemination: NR Outcomes: NR Quality Rating: 1.83

Evidence Table 1. Internet Access and Empowerment — A Community-Based Health Initiative: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Masi CM, Suarez-Balcazar Y, et al., 2003	Duration: 2 years Nature of Community Involvement: • Study design • Recruitment and retention • Intervention development, implementation Quality Rating: 2.09	Yes The decision to partner with block leaders and provide Internet access was made after discussion with the community An advisory board comprising local business owners and community leaders provided advice to the project on a regular basis	No

Evidence Table 1. Internet Access and Empowerment — A Community-Based Health Initiative: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
<u>Assessed:</u> No <u>Addressed:</u> No	Yes Monthly phone interviews were conducted to assess the process	Yes The core research team included staff from West Side Health Authority, a local community-based organization, and 2 community residents who served as research assistants	<u>Dissemination of Findings:</u> No <u>Application of Findings:</u> No <u>Sustainability of Interventions:</u> No

Evidence Table 1. The Korean Breast and Cervical Cancer Screening Intervention Project “Health is Strength”: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Wismer BA, Moskowitz JM, et al., 2001* Wismer BA, Moskowitz JM, et al., 1998[a] Wismer BA, Moskowitz JM, et al., 1998[b] Chen AM, Wismer BA, et al., 1997 Funder: CDC Avon Breast Health Access Fund Funding Period: 10 years (exact period dates unclear) Study Name: The Korean Breast and Cervical Cancer Screening Intervention Project, “Health is Strength”	Research Objectives: To investigate if a community intervention can improve the rate of breast and cervical cancer screening among Korean-American women in Alameda County, CA	Study Design: Quasi-experimental Duration of Study: 10 years Setting: Alameda (intervention) and Santa Clara (control) Counties, CA	Intervention: Community intervention through Korean-American lay health advisors primarily at Korean churches; educational materials and workshops in Korean about breast and cervical cancer screening; written material was also mailed to baseline survey participants Duration of Intervention: 5 years

* Primary article for this study

Evidence Table 1. The Korean Breast and Cervical Cancer Screening Intervention Project "Health is Strength": Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Korean-Americans aged 18 and older Sampling Strategy: Randomly selected phone numbers based on a Korean surname telephone list Sample Size: 1994: 10,087 1997: 9,929 (12%-13% eligible) Response Rate at Each Measure: 1994: n = 818 1997: n = 724 (n = 76%-80%) Retention Rate: NR	Primary Variables Measured: 4 self-reported variables concerning adherence to breast and cervical cancer screening; in 1997, also assessment of exposure to intervention Data Collection Methods: Quantitative: Preintervention and postintervention cross-sectional telephone surveys	Other Variables Measured: • Sociodemographic factors • Immigration • Access to health care • Sources of health information • Prevalence of morbidity and screening behaviors	Intervention Effects: • No significant differences in changes in screening between the intervention and control groups • No significant overall improvement in screening attributable to the intervention could be shown in the intervention group • Stratification in subgroups did not reveal different results • Women with one or more intervention exposures tended to have significantly more Pap smears ($P = 0.05$) and mammograms ($P = 0.041$) than women with no exposure	Methodology: Yes Participation of Korean Community Advisory Board (KCAB) and Korean-speaking interviewers Measures: Yes Immigrant-specific SES data were assessed Recruitment: Yes Korean-speaking telephone interviewers Intervention: Yes Due to CBPR-requirements, only reduced staff was available at the time of the intervention; authors conclude that the intervention was therefore not fully implemented (only 40% measurable exposure) Dissemination: Yes KCAB members presented data at a Korean press conference Outcomes: Yes KCAB helped interpret data Quality Rating: 2.43

Evidence Table 1. The Korean Breast and Cervical Cancer Screening Intervention Project "Health is Strength": Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Wismer BA, Moskowitz JM, et al., 2001* Wismer BA, Moskowitz JM, et al., 1998 Wismer BA, Moskowitz JM, et al., 1998 Chen AM, Wismer BA, et al., 1997	<u>Duration:</u> 10 years <u>Nature of Community Involvement:</u> • Selection of research question • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified <u>Quality Rating:</u> 2.72	Yes The Korean Community Advisory Board (KCAB) helped to develop and implement the program to ensure cultural appropriateness	Yes KCAB involvement throughout all stages of the project Telephone interviewers were bilingual Korean-Americans Relationship building with Korean American ministers began 2 years prior to the intervention KCAB members provided ready access to Korean media to promote the survey

* Primary article for this study

Evidence Table 1. The Korean Breast and Cervical Cancer Screening Intervention Project "Health is Strength": Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Socioeconomic factors assessed in the survey Addressed: Not stated; mammogram facility negotiations mentioned	Yes Final question to invite respondents to Asian Health Services was added to survey Intervention and survey questions were modified after first survey results University staff wanted a control county with greater geographical separation but compromised with KCAB's desire for familiarity, potential for relationship building and postintervention dissemination	Yes New study to assess the needs of elderly Korean-Americans was initiated by KCAB Korean staff and KCAB became conversant with survey methodology and analysis University researchers learned about Korean culture	Dissemination of Findings: Yes KCAB members presented data at a Korean press conference Application of Findings: No Sustainability of interventions Closer contact of community to Asian Health Services

Evidence Table 1. Okanagan Diabetes Project: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Daniel M, Green LW, et al., 1999 Funder: Health Canada (National Health Research and Development Program grant) Funding Period: April 1994 to May 1996 Study Name: Okanagan Diabetes Project	Research Objective: Address the effectiveness of the community-directed initiative in achieving • Risk reduction or improved control among "high-risk" individuals w/ or at familial risk for diabetes • Greater coping among individuals with diabetes and impaired glucose tolerance • Community-wide diabetes risk reduction • Social environmental change	Study Design: Quasi-experimental design with nonequivalent control groups and pretest and posttest measures Duration of Study: 24 months Setting: Three matched Indian Band communities in the Okanagan region of British Columbia, Canada	Intervention: A wide variety of activities and education measures based on community assessment of need, aimed at • Primary prevention • Screening and secondary prevention Activities included • Exercise classes/groups • Health events • Cooking demonstrations • Stop smoking group • Supermarket/restaurant tours • Educational media campaigns • Some environmental support via the Band Council of the Intervention Indian Band Duration of Intervention: 16 months

Evidence Table 1. Okanagan Diabetes Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: • Preintervention interviewees • High-risk cohorts • Cross-sections of populations • Community-level research personnel who were residents in the intervention community Sampling Strategy: • Cohort: Identified through Medical Services Branch Records and recruited through meetings with community workers • Cross-sectional: Simple random sampling of Band membership lists • Surveys of community systems: Surveyed at meetings w/ researchers Sample Size: • Preintervention interviewees: n = 59 • High-risk cohorts: n = 105 • Cross-sections: n = 295 • Community systems: NA	Primary Variables Measured: Biological measures: • Blood pressure Behavioral and social measures: • Changes in community systems Data Collection Methods: Cohort: Measurements were taken in person; survey questions were self-completed except for low literacy (5% — mostly elderly) participants, who were surveyed orally Cross-sectional: Survey instrument by telephone interview or home visit (if not telephone) Community surveys: Standardized questions posed to community-level research personnel during meetings	Other Variables Measured: See Column 6 for all variables measured	Intervention Effects: Cohort: Statistically significant differences between changes in the intervention and comparison condition in the desired direction were found for BMI and systolic BP; changes in the opposite direction were found for glycosylated hemoglobin and sweat-producing activity ≥ 1/week. Cross-section: Changes were seen in sweat-producing activity ≥ 1/week and number of events of sweat-producing activity/week; a change was also seen in actual knowledge of diabetes, due to a decrease in knowledge in the comparison condition	Methodology: Used preintervention interviews and meetings to identify community needs as well as challenges and barriers to the project Measures: Measures included surveys of community systems at 3 levels: subsystem changes within community groups, changes in relationships among subsystems, and intermediate steps in the social change process Recruitment: Participants recruited through face-to-face contact with community workers Intervention: Intervention efforts were developed with the involvement of the intervention community Dissemination: No Outcomes: No (no intervention effect was observed)

Evidence Table 1. Okanagan Diabetes Project: Research Components (continued)

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Daniel M, Green LW, et al., 1999 Continued			

Evidence Table 1. Okanagan Diabetes Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
<u>Response Rate at Each Measure:</u> • Preintervention interviewees: NA • High-risk cohorts, intervention condition: 93.6, 71.3, 81.9 • Comparison condition: 84.1, 55.8, 63.7 • Cross-section: average = 80.1% • System surveys: NA <u>Retention Rate:</u> Cohorts: 105/207 = 50.7% Cross-section: NA, as same people not interviewed for second survey			The authors concluded that no effect was observed, as these changes were so few compared to the number of variables measured; changes were observed in the community systems, but the authors were careful to point out that such observations were highly subjective	

Evidence Table 1. Okanagan Diabetes Project: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Daniel M, Green LW, et al, 1999	Duration: NR Nature of Community Involvement: • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation	No	No Paper states that previous studies may not have achieved results because of insensitivity to Aboriginal culture, and that this study therefore involves community in the planning and intervention process, but the authors do not detail specific barriers or how they were addressed

Evidence Table 1. Okanagan Diabetes Project: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Literacy and education were assessed, though no report of income assessment Addressed: No	No	Yes A coalition evolved from project workers, who made local, regional, and national presentations on the project; the Band Council hired a recreation coordinator	Dissemination of Findings: Yes Public meetings held after each round of data collection; comparison communities told that results would be made available to them and that they would be given an opportunity to develop prevention programs on completion of the project Application of Findings: No Sustainability: No

Evidence Table 1. Wai'anae Cancer Research Project: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Gotay CC, Banner RO, et al., 2000* Matsunaga DS, Enos R, et al., 1996 Banner RO, DeCambra H, et al., 1995 Funder: NCI Funding Period: 1990-1994 Study Name: Wai'anae Cancer Research Project	Research Question: To develop and test the effectiveness of a culturally appropriate intervention in increasing breast and cervical cancer screening practices among Native Hawaiian women	Study Design: Quasi-experimental (pretest and posttest) Duration of Study: 3 years Setting: Oahu, Hawaii neighborhood	Intervention: Kokua Group, lay health educator-led group discussions to provide support and education for breast and cervical cancer screening Vouchers for free mammograms and Pap tests provided to patient and friend

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* Primary article for this study

Evidence Table 1. Wai'anae Cancer Research Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
<u>Participants:</u> English-speaking Native Hawaiian women ≥ 18 years old <u>Sampling Strategy:</u> Simple random sample (empanelled) Random digit dialing in study communities; random selection from within eligible households <u>Sample Size:</u> 678 (intervention: n = 318; control: n = 360) <u>Response Rate at Each Measure:</u> 54% of total sample at baseline (678/1260); intervention group = 318/1,260 (25%); control group = 360/1,260 (29%) <u>Retention Rate:</u> 54% of total sample at baseline (678/1,260)	<u>Primary Variables Measured:</u> • Changes in 4 screening behaviors for cervical and breast cancer • Support for screening <u>Data Collection Methods:</u> Quantitative: Telephone survey Qualitative: Focus groups	<u>Other Variables Measured:</u> • Sociodemographic factors • Kokua awareness • Kokua attendance • Knowledge • Attitudes/ beliefs	<u>Intervention Effects:</u> Increased compliance with screening guidelines ($P < 0.05$), evening cancer screening clinic for Kokua group members, cancer support group, improved research capabilities	<u>Methodology:</u> Survey administered by local interviewers; administration protocols adapted for cultural appropriateness <u>Measures:</u> Cultural adaptation of survey content <u>Recruitment:</u> Trained telephone interviewers to be culturally sensitive <u>Intervention:</u> Community members led groups, participated in recruitment; minimal intervention group created (by post-interview mailing) <u>Dissemination:</u> Mailing "minimal intervention" for participants to be "first to know"; developed protocols shared with other professionals, researchers, etc. <u>Outcomes:</u> Economic benefits; improvements in health services and systems <u>Quality Rating:</u> 2.39

Evidence Table 1. Wai’anae Cancer Research Project: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Gotay CC, Banner RO, et al., 2000* Matsunaga DS, Enos R, et al., 1996 Banner RO, DeCambra H, et al., 1995	<u>Duration:</u> 7 years <u>Nature of Community Involvement:</u> • Selection of research question • Proposal development • Financial responsibility for grant funds • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified <u>Quality Rating:</u> 3.00	<u>Structure/Mechanism</u>: • Community Involvement Committee of Board of Directors • Cancer Research Planning Committee • Task group to plan survey content and review drafts • Planning committee — selection of local health center to administer grant • Community Research Committee — proposal development group; worked for 2 years • Community Advisory Committee: Community volunteers with involvement over 7 years • Steering Committee — policymaking group including 2 community representatives	Yes Survey incorporated appropriate language and familiar names, organizations and concepts Survey employed Native Hawaiian speakers

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* Primary article for this study

Evidence Table 1. Wai'anae Cancer Research Project: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Yes Sociodemographic factors measured Vouchers provided to address financial barriers	Yes During survey administration (protocols and content) and dissemination of survey findings Several approaches used to facilitate participation by community advisory committee (in light of busy schedules and other responsibilities)	Yes <u>Individual</u>: Interviewing skill Experience in the research planning, implementation <u>Community</u>: Partnership building Organization and participation on research planning committees/groups Improvements in knowledge, skills, and resources: economic benefit to community health center; jobs/job training for local residents; new health services at the health center; securing additional local funds for program support after project ended; enhanced capacity for peer education; improved research capabilities; participation in publication of research findings	<u>Dissemination of Findings:</u> Principles and guidelines and project products to other communities, professionals and researcher; dissemination of findings to participants regarding cancer screening rates <u>Application of Findings:</u> Process (e.g., peer education, participatory approach) applied to training of students and health services/system design <u>Sustainability of Findings:</u> Health services (women's clinic and cancer support group) developed during research project were sustained with local funding 3 years after project's end

Evidence Table 1. NY Immunizations: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Rosenberg Z, Findley S, et al., 1995 Funder: NY State Department of Health NY State Department of Social Services Funding Period: NR Study Name: New York State Immunization and Primary Health Care Initiative	Research Objective: To test the effectiveness of alternative community-based strategies to increase the immunization record among children	Study Design: One group pretest and posttest design Duration of Study: NR Setting: New York City neighborhoods with high measles incidence (1981-1991)	Intervention: Various outreach strategies to identify and enroll under-immunized children Duration of Intervention: 9 months

Evidence Table 1. NY Immunizations: Research Component (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Families with under-immunized children Sampling Strategy: Nonprobability sample from a selected group of effective community-based organizations (CBOs) Sample Size: 3,928 (children under age 5 who were not up to date with immunization records after contacting 7,516 families) Response Rate at Each Measure: 2,676 (79.9%) (children who were enrolled in the program) Retention Rate: NR	Primary Variables Measured: • Enrollment of "hard to reach" children • Immunization status • Effectiveness at recruitment • Effectiveness of primary care referrals • Effectiveness at tracking and retaining children Data Collection Methods: Followup of participants mainly using phone calls	Other Variables Measured: • Ethnicity • Residence • Health insurance • CBO characteristics	Intervention Effects: Coverage rates for the basic antigens increased from 24% to 73% within recruited cohort	Methodology: No Measures: No Recruitment: Selection bias likely: only most effective CBOs were selected to participate Intervention: Yes CBOs were responsible for designing intervention Dissemination: No Outcomes: No Quality Rating: 1.52

Evidence Table 1. NY Immunizations: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Rosenberg Z, Findley S, et al., 1995	Duration: 9 months Nature of Community Involvement: • Financial responsibility for grant funds • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation Quality Rating: 2.19	CBOs decided how to allocate their funds based on their outreach strategies	No

Evidence Table 1. NY Immunizations: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
<u>Assessed:</u> Yes Sociodemographics, Medicaid status, immigrant status <u>Addressed:</u> Yes Providers were eligible to receive free vaccinations for children referred through the program	No	Yes University staff trained CBOs in data collection, review of immunization records	<u>Dissemination of Findings:</u> No <u>Application of Findings:</u> No <u>Sustainability of Interventions:</u> No

Evidence Table 1. Stress and Wellness Project: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Heaney CA, Israel BA, et al., 1993* Schurman SJ, 1996 Baker EA, Israel BA, et al., 1994 Israel BA, Schurman SJ, et al., 1992 Hugentobler MK, Israel BA, et al., 1992 Israel BA, Schurman SJ, et al., 1989 Israel BA, House JS, et al., 1989 Funder: National Institute for Alcohol Abuse and Alcoholism, joint union-management funds (United Autoworkers/General Motors) Funding Period: NR Study Name: NR, focus on occupational stress	Research Objective: Objective 1: To increase the understanding of the relationship between occupational stress, psychosocial factors, job satisfaction, and mental and physical health Objective 2: To determine if a PAR project is more effective in a cooperative labor management setting at addressing factors in the stress process	Study Design: Objective 1: Observational Objective 2: Natural quasi-experimental with data collected before and after plant split into two Duration of Study: 6 years Setting: South-central Michigan	Intervention: • Daily newsletter • Health awareness and screening programs • Information display cases • Feedback and recommendations to people on sources of stress • Pilot project on quality improvement • Appropriation of time on the job for leaders of existing employee participation programs to follow through on identified problems • Modification of performance appraisal system for salaried workers Duration of Intervention: NR

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* Primary article for this study

Evidence Table 1. Stress and Wellness Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Employees of a car components manufacturing plant Sampling Strategy: Nonprobability Sample Size: Focus Group: NR In-depth interviews: 42 Surveys: 1,100 Response Rate at Each Measure: Surveys: 66% (1985) 41% (1987) 62% (1991) Retention Rate: NR	Primary Variables Measured: Surveys: stressors, health variables, and psychosocial mediating factors Data Collection Methods: Quantitative: • 3 surveys in 1986, 1987, 1991 Qualitative • In depth Interviews • Focus groups • Field notes of committee meetings	Other Variables Measured: • Labor management relations • Social support • Participation in decision-making	Intervention Effects: Objective 1, survey results: Researchers and committee members identified 4 major problem areas as a result of the findings: • Lack of information • Problems with supervisors • Lack of participation and influence on decisionmakers • Conflict between producing quantity versus quality of product Interventions addressing lack of information: • Daily newsletter • Rumor mill (meetings with management) Interventions addressing lack of participation and influence and conflict between quality and quantity: • Pilot study on quality implementation and elimination of waste Objective 2: Overall, social environment at work and employee well-being did not improve during the course of the study Involvement in PAR stress project was associated with enhanced participation in decisionmaking in both settings, with improved climate for participation in the cooperative setting, increased coworker support, and decreased symptoms for depression in the adversarial setting	Methodology: No Measures: Yes Wellness Committee identified stressors and other factors for which measures were created Recruitment: Yes Committee involvement led to a much higher survey response rate than in previous surveys Intervention: Yes Results of surveys were used by the committee to develop intervention strategies Dissemination: Committee revised drafts of articles, e.g., the term “worker” was changed to “employee” Committee disseminated results to plant members Outcomes: No Quality Rating: 2.26

Evidence Table 1. Stress and Wellness Project: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Heaney CA, Israel BA, et al., 1993* Schurman SJ, 1996 Baker EA, Israel BA, et al., 1994 Israel BA, Schurman SJ, et al., 1992 Hugentobler MK, Israel BA, et al., 1992 Israel BA, Schurman SJ, et al., 1989 Israel BA, House JS, et al., 1989	Duration: 6 years Nature of Community Involvement: • Selection of research question • Funding (researchers obtained initial funding, subsequent funding provided by joint management and union funds) • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified Quality Rating: 2.90	Yes A Stress and Wellness Committee comprising union, management, and the university team guided the project on data collection, analysis, and intervention design, implementation, and evaluation Committee and researchers cooperated in developing intervention strategies based on the outcomes of the surveys	Yes Committee members suggested scheduling interview sessions during working hours to raise participation even though this involved shutting down production; committee members met with upper management and obtained approval for this plan Committee involvement led to a much higher survey response rate than previous surveys

Evidence Table 1. Stress and Wellness: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Survey assessed psychosocial factors, work-related health stressors Addressed: Yes Interventions addressed work-related stressors	Committee was larger than the researchers wanted, but the researchers agreed, resulting in a more representative and longer-lived group Researchers gave a presentation to management leaders and union officials on request of the committee Committee members wanted to hold a health promotion program despite researchers' reservations, then, the researchers suggested followup strategies that would strengthen the intervention	Yes Committee members began to collect their own data to understand how to revise the weekly newsletter with information necessary for employees to do their jobs Committee obtained a $40,000 grant to carry out a health screening project	Dissemination of Findings: Yes Researchers provided a written report to the committee and organized a 2-day meeting to analyze the findings Application of Findings: Yes Management worked with the committee to incorporate ideas and goals into the overall strategic management of the factory Sustainability of Interventions: No

Evidence Table 1. Women Dedicated to Demolishing Denial: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
<u>Publications:</u> Stevens PE, Hall JM, 1998* Stevens PE, 1994 <u>Funder:</u> American Foundation for AIDS Research Targeted Education <u>Funding Period:</u> 2 years (6/1992 to 6/1994) <u>Study Name:</u> Women Dedicated to Demolishing Denial: HIV Risk Reduction for Lesbians and Bisexual Women	<u>Research Objective:</u> • To identify risk behaviors • To explore strategies to prevent HIV • To understand difficulties in reducing HIV • To provide specific education	<u>Study Design:</u> Nonexperimental <u>Duration of Study:</u> NR <u>Setting:</u> San Francisco	<u>Intervention:</u> • Individually tailored education based on interview contents • Safer sex kits • Presentations at clubs and bars <u>Duration of Intervention:</u> NR

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* Primary article for this study

Evidence Table 1. Women Dedicated to Demolishing Denial: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR, Quality Rating for Research Elements (Range 1-3)
Participants: Lesbians and bisexual women socializing in women's bars, dance clubs, sex clubs, or gay/lesbian community events Sampling Strategy: Nonprobability: convenience sample Sample Size: 1,189 interviews (number of respondents likely to be fewer; duplicate interviews) Response Rate at Each Measure: NR Retention Rate: NA	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: Field interviews Content analysis	Other Variables Measured: No predefined variables specified	Intervention Effects: Anecdotal evidence on the effect of the intervention; 20% of 626 women interviewed said that they had changed their behavior (using safer sex and HIV risk reduction behaviors); several of these women said that these changes were a result of Lyon Martins peer educators in clubs Results of Analysis: Key findings describe the HIV risk taking common in this population and their needs for support in reducing risk	Methodology: No Measures: No Recruitment: Yes Peer educators had to be lesbian or bisexual to reflect the study's intended population Intervention: No Dissemination: No Outcomes: No Quality Rating: 1.52

Evidence Table 1. Women Dedicated to Demolishing Denial: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement, Quality Rating for Participatory Elements (Range 1-3)	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Stevens PE, Hall JM, 1998* Stevens PE, 1994	Duration: 2 years Nature of Community Involvement: • Selection of research question • Financial responsibility for grant funds • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings Quality Rating: 2.19	Yes Project was sponsored by Lyon-Martin women's health services, a primary health care clinic emphasizing health care for lesbian and bisexual women Lyon-Martin hired peer educators and the project coordinator	Yes Educators had to be lesbian or bisexual No direct questions about sexual identity were asked in the interviews to ensure that women freely discussed behaviors and perceptions

* Primary article for this study

Evidence Table 1. Women Dedicated to Demolishing Denial: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Minimal sociodemographics on age and race; no identifying information was collected Addressed: No	No	Yes Educators learned how to conduct interviews and gained social prestige within the community through their involvement	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: No

Evidence Table 2.
Interventions Either Not Completed or Not Evaluated

Evidence Table 2. Community Action Against Asthma: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Keeler GJ, Dvonch TJ, et al., 2002* Parker EA, Israel BA, et al., 2003 Clark NM, Brown RW, et al., 1999 Funder: National Institute of Environmental Health Sciences US Environment Protection Agency Funding Period: 5 years Study Name: Community Action Against Asthma	Research Objective: Study Objective: To gain an increased understanding of and to address the environmental and psychosocial triggers for asthma in children's homes and neighborhoods A process evaluation of the community-based partnership elements of the study was also conducted	Study Design: Intended study design: Experimental Baseline data: Observational Process evaluation: Non-experimental Duration of Study: NR Setting: East side and southwest portion of Detroit	Intervention: Community Environmental Specialists provided education and materials that relate to the reduction of asthma-triggers during home visits (minimum 12 visits) Duration of Intervention: 2 years

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* Primary article for this study

Evidence Table 2. Community Action Against Asthma: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Intervention: Families of children 7 to 11 years old with moderate to severe asthma Process evaluation: Steering Committee members Sampling Strategy: Intervention: Probability sample, staggered randomization Process evaluation: NR Sample Size: Screening questionnaire: 3,067 valid questionnaires returned; 331 agree to participate and are randomized into the study Indoor measurements: 20 Process evaluation: 22 out of 25 Steering Committee members Response Rate at Each Measure: NR Retention Rate: NR	Primary Variables Measured: • Health outcomes • Psychosocial factors Data Collection Methods: Intervention: Quantitative, • Self-administered screening questionnaire • Microenvironmental measurements in schools and homes • Pulmonary function tests • Daily diary of symptoms and medications used • Annual household environmental assessment • Annual questionnaire for caregivers and children Process evaluation: Qualitative, in-depth interviews	Other Variables Identified: Environmental and meteorological data	Intervention Effects: NR (analysis ongoing) Results of Process Evaluation: Steering Committee members identified partnership accomplishments and challenges	Methodology: No Measures: No Recruitment: Yes Steering Committee actively participated in hiring and training outreach workers who performed measurements Intervention: NA Dissemination: No Outcomes: No

Evidence Table 2. Community Action Against Asthma: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Keeler GJ, Dvonch TJ, et al., 2002* Parker EA, Israel BA, et al., 2003 Clark NM, Brown RW, et al., 1999	Duration: NR Nature of Community Involvement: • Selection of research question • Proposal development • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings	Yes Steering Committee comprising 13 community-based partner representatives out of 25 members guided the project	No

* Primary article for this study

Evidence Table 2. Community Action Against Asthma: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
<u>Assessed:</u> Yes Sociodemographics and psychosocial factors <u>Addressed:</u> No	Since the Steering Committee met only once monthly, community partners felt shut out of decisions that were made in-between monthly meetings; the research team instituted a process to handle such situations	Yes Community-based organizations: • Credibility to community-based organizations' projects • Increased understanding of asthma • Ability to disseminate information to the community Researchers: • Participation in the research • Funding • Publicity and recognition • Opportunities for interdisciplinary learning • Career advancement	<u>Dissemination of Findings:</u> Yes Findings were disseminated to the community and at conferences <u>Application of Findings:</u> No <u>Sustainability of Interventions:</u> No

Evidence Table 2. PRAISE!: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Ammerman A, Washington C, et al., 2002 Corbie-Smith G, Ammerman A, et al., 2003 Funder: National Institute of Health; Robert Wood Johnson Minority Medical Faculty Development Program; National Cancer Institute Funding Period: 1996-2001 Study Name: Partnership to Reach African Americans to Increase Smart Eating (PRAISE!)	Research Objective: Research objective of PRAISE!: • To develop and test a culturally sensitive intervention for dietary change among African Americans Objective of these articles: • To examine community member's perceptions of trust, benefit, satisfaction, and burden associated with their participation • To collect qualitative data to ensure culturally appropriate intervention design	Study Design: Experimental (RCT) Exploratory (for qualitative data) Duration of Study: 5 years (data for this article were collected after 1 year) Setting: 60 African American churches in 8 North Carolina counties	Intervention: • 3 workshops on dietary cancer prevention • Communication center • Quarterly packets • Tailored health bulletin • Food festival • Food events • Inspirational booklet • Skills assessment of the congregation Duration of Intervention: 12 months

Evidence Table 2. PRAISE!: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: African American church members Sampling Strategy: Participating churches (n = 60) were allocated randomly to intervention or control groups; the individuals in the "measurement groups" were volunteers and not randomly selected Sample Size: 1,309 Intervention: n = 624 Control: n = 685 Response Rate at Each Measure: Intervention: 63.9% (n = 399) Control: 70.7% (n = 484) Retention Rate: NA	Primary Variables Measured: Perception of trust in the research project, benefit from involvement, satisfaction with the project, perception of burden associated with participation (also dietary outcome measures and biochemical measures) Data Collection Methods: Quantitative: 2 phone interviews at baseline 2 followup phone surveys of the same participants after 1 year, administered by blinded interviewers Qualitative: Focus groups with church members and pastors	Determinants of Intervention Effects: • Health • Psychosocial factors • Demographics • Church related questions	Intervention Effects: • Overall high levels of trust, perceived benefit, and satisfaction; low levels of perceived burden in both groups • Participants in the intervention group reported more perceived benefit and trust ($P < 0.05$) • Members of smaller churches were associated with higher perceived benefit ($P < 0.01$) Articles do not report results of RCT and the effectiveness of the intervention	Methodology: Yes Community members were hired as staff and involved with decisions about survey design and implementation Measures: Yes Involvement of community members Recruitment: Yes Based on advice from church consultants, participants were not selected randomly but were volunteers Intervention: Yes Study team relied on input from members of the church Dissemination: No Outcomes: No

Evidence Table 2. PRAISE!: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Ammerman A, Washington C, et al., 2002 Corbie-Smith G, Ammerman A, et al., 2003	Duration: 5 years Nature of Community Involvement: • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation	Yes Design included a delayed intervention control group responding to concerns that the control group would not get the intervention	Yes All members of PRAISE! staff who interacted with the churches were African American or pastor's wives

Evidence Table 2. PRAISE!: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Baseline interview assessed socioeconomic variables Addressed: No	Yes Survey administration was timed around church events and holidays following guidance from community partners	Yes Training focused on providing skill-building and educational resources to church members A strong sense of local ownership of the program was developed; many churches have indicated interest in sharing the program with other nearby churches	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: No

Evidence Table 2. Seattle King County Healthy Homes Project: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Krieger JW, Song L, et al., 2000 Funder: National Institutes of Environmental Health Sciences; CDC Funding Period: NR Study Name: Seattle King County Healthy Homes Project	Research Objective: To evaluate whether outreach, education, and simple tools can reduce indoor asthma triggers and asthma morbidity; this article reports preliminary baseline findings	Study Design: Experimental (RCT) Duration of Study: NR Setting: King County, Washington	Intervention: Outreach workers conduct home assessments and develop action plans; educational and social support Duration of Intervention: NR

Evidence Table 2. Seattle King County Healthy Homes Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Households with a child aged 4 to 12 years with asthma, household income less than 200% of poverty or Medicaid enrollment Sampling Strategy: Nonprobability selection: eligible parents recruited through clinics, government and community agencies, and other outreach efforts Sample Size: Planned: 300 Reported: 155 Response Rate at Each Measure: 85% (n = 131) Retention Rate: NA	Primary Variables Measured: NR Data Collection Methods: Surveys and observation	Other Variables Measured: • Sociodemographic data • Medication compliance • Smoking • Household resources to control asthma • Caregiver knowledge	Intervention Effects: NR	Methodology: No Measures: Yes Draft questions were discussed with Project Advisory Board Recruitment: Yes Community agencies and churches participated in recruitment Intervention: NR Dissemination: NR Outcomes: NR

Evidence Table 2. Seattle King County Healthy Homes Project: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Krieger JW, Song L, et al., 2000	Duration: NR Nature of Community Involvement: • Recruitment and retention • Measurement instruments and data collection	Yes Survey questions were revised after discussion with Project Advisory Board	No

Evidence Table 2. Seattle King County Healthy Homes Project: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Sociodemographics, income, insurance coverage, household composition Addressed: Yes Social support and provision of anti-allergic materials	No	No	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: No

Evidence Table 2. Seattle Vaccine: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Krieger JW, Castorina JS, et al., 2000 Funder: CDC, United Way of King County Funding Period: NR Study Name: Seattle Vaccine	Research Objective: To develop and evaluate a Senior Center-based program to increase influenza and pneumococcal immunization rates	Study Design: RCT Duration of Study: NR Setting: Seattle Senior Center	Intervention: A specially designed educational brochure was mailed along with a postage-paid reply card to track immunization status If response card not received, Senior Center volunteers made telephone contact using a script to encourage receipt of immunizations and to address specific barriers to immunization Duration of Intervention: 6 weeks

Evidence Table 2. Seattle Vaccine: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Seniors ≥ 65 years old Sampling Strategy: Subjects identified by Senior Center membership and marketing database • All potential subjects sent recruitment letter and baseline survey • All who returned the surveys and were eligible were enrolled Sample Size: 1,246 Response Rate at Each Measure: Intervention: 530/622 Control group: 553/624 Retention Rate: NR	Primary Variables Measured: • Proportion of individuals reporting receipt of influenza immunization during the study period • Proportion of individuals reporting receipt of pneumoccal immunization during study period among individuals reporting never having received a pneumoccal vaccine Data Collection Methods: Quantitative: Surveys	Other Variables Measured: Changes in knowledge, attitudes, and perceived barriers related to immunizations and participant appraisal of the intervention Also performed a cost analysis of vaccine-promotion activities	Intervention Effects: Pneumococcal ($P < 0.001$) and influenza ($P < 0.0001$) immunization rates increased more in the intervention group and among participants of the intervention group who did not receive a vaccine in the previous year Personal contact for isolated seniors, increased capacity of a senior center to conduct health-promotion activities, training of community members in research methods, providing an opportunity for the senior volunteers to feel useful and to make a valuable contribution to their community, and creating linkages between public institutions, private agencies, and community members	Methodology: No Measures: No Recruitment: Self-selection of participants could diminish research quality Intervention: No Dissemination: No Outcomes: No

Evidence Table 2. Seattle Vaccine: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Krieger JW, Castorina JS, et al., 2000	Duration: NR Nature of Community Involvement: • Study design • Recruitment and retention • Intervention development, implementation	Yes Community members involved in focus groups conducted to develop the protocol for the intervention.	No

Evidence Table 2. Seattle Vaccine: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
<u>Assessed:</u> Yes Demographic data were collected <u>Addressed:</u> No	No	Yes Increased capacity of Senior Center to conduct health-promotion activities Training of community members in research methods; providing opportunity for senior volunteers to feel useful and to make a valuable contribution to their community Creating linkages between public institutions, private agencies, and community members	<u>Dissemination of Findings:</u> No <u>Application of Findings:</u> No <u>Sustainability of Interventions:</u> No

Evidence Table 2. TEAL: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Kegler MC, Malcoe LH, et al., 2000 Funder: National Institute of Environmental Health Sciences Funding Period: NR Study Name: Tribal Efforts Against Lead (TEAL)	Research Objective: To design, implement, and examine the effectiveness of the project in • Reducing the prevalence of elevated blood lead levels in Native American children • Inducing sustainable behavioral changes • Changing health beliefs to support preventive behaviors • Enhancing the capacity of the Native American community to address environmental lead exposure	Study Design: Quasi-experimental Duration of Study: NR Setting: Ottawa County, Oklahoma	Intervention: Only for Native Americans; 40 lay health advisors who disseminate information through their social networks Duration of Intervention: NR (ongoing study)

Evidence Table 2. TEAL: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Native American (intervention) and white (control) residents with a child aged 1 to 6 Sampling Strategy: Probability: Random sampling (city blocks and residences were randomly selected) Sample Size: Blood samples: Native American: 144 White: 187 Structured interviews with: Caregivers: 332 Tribal decisionmakers: 23 Environmental assessments: 245 Survey: NR Response Rate at Each Measure: 60.2% (overall) Retention Rate: NA	Primary Variables Measured: Blood lead level Interviews: • Health beliefs • Knowledge • Lead exposure • Risk factors • Preventive behaviors Data Collection Methods: • Blood samples • Structured interviews • Environmental assessments • Survey	Other Variables Measured: • Basic social network information • Food frequency questionnaire • Sociodemographic factors	Intervention Effects: NR (ongoing study)	Methodology: No Measures: No Recruitment: Yes Researchers hired local residents as canvassers, interviewers, and screening coordinators Intervention: Yes Community Advisory Board (CAB) developed training manual for lay health advisors Dissemination: No Outcomes: No

Evidence Table 2. TEAL: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Kegler MC, Malcoe LH, et al., 2000	Duration: NR Nature of Community Involvement: • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified	Yes CAB was established prior to the baseline assessment and provided guidance and direction to the project	Yes Lay health advisors received a monthly stipend of $150, participants received a $15 gift certificate

Evidence Table 2. TEAL: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Caregiver survey assessed sociodemographic data Addressed: No	Yes Intervention was modeled along the concept of a clan mother; lay health advisors called themselves the "Society of Clan Mothers and Clan Fathers"	Yes Project created jobs for the community and provided residents with research skills that might be transferred to other job settings Each tribe received HEPA vacuums	Dissemination of Findings: Researches presented assessment data to the CAB to gain insight and to distribute information to the tribes Application of Findings: Yes CAB developed an action plan to face the long-term environmental lead problem Sustainability of Interventions: No

Evidence Table 2. East Side Village Health Worker Partnership: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Schulz AJ, Parker EA, et al., 1998* van Olphen J, Schulz A, et al., 2003 Becker AB, Israel BA, et al., 2002 Israel BA, Farquhar SA, et al., 2002 Schulz AJ, Parker EA, et al., 2002 Parker EA, Lichtenstein RL, et al., 2001 Schulz AJ, Israel BA, et al., 2001 Schulz AJ, Israel BA, et al., 2000 Parker EA, Schulz AJ, et al., 1998 Schulz AJ, Israel BA, Becker AB, et al., 1997 Funder: CDC Funding Period: 1995-2003 Study Name: East Side Village Health Worker Partnership	Research Objective: • To identify stressors and protective factors that contribute to poor health outcomes for women and children • To assess community concerns and resources to guide the intervention • To gather baseline data • To develop and evaluate a lay health advisor intervention aimed at reducing stressors, strengthening protective factors, and enhancing health	Study Design: Nonexperimental Duration of Study: NR Setting: East Side Village, Detroit	Intervention: 30 lay health advisers (Village Health Workers) focused on increasing the problem-solving capacity of their community to reduce stressors or increase protective factors: Informational support • Information on health-related topics and resources Emotional support • Grief support program entitled You Are Not Alone (YANA) Instrumental support • Providing transportation to clinics, helping to locate food, organizing and implementing health fairs • Creating new resources - YANA - Village Voice newsletter Organized change efforts and participated in other efforts • Community law enforcement and neighborhoods work on arson prevention, abandoned vehicle removal, and monitoring food safety in local food stores Educating state legislators to influence policies and programs • Helped to reestablish smoking cessation program funding through letter-writing campaign Duration of Intervention: NR

* Primary article for this study

Evidence Table 2. East Side Village Health Worker Partnership: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Survey: Women aged 18 and older with the responsibility of child care for 5 hours a week or more In-depth interviews: Residents who were actively engaged in the community and were selected as Village Health Workers (VHWs) Focus group interviews Sampling Strategy: Surveys: 2-stage simple random sample of 2,800 out of 6,124 blocklisted households bounded by 4 major streets and then random selection from eligible individuals within households Sample Size: Survey: 865 In-depth interviews: 48 Focus groups: NR Response Rate at Each Measure: 81% (n = 700) Retention Rate: NA	Primary Variables Measured: • Stressors • Protective factors • Social support • General health Data Collection Methods: Quantitative: • Cross-sectional face-to-face surveys Qualitative: • In-depth interviews with VHWs • Observations by committee members • Focus group interviews	Other Variables Measured: • SES • Religion/ spirituality • Neighborhood ties	Intervention Effects: NR (intervention ongoing)	Methodology: No Measures: Yes Steering Committee helped to identify stressors Recruitment: Yes Steering Committee selected and trained interviewers to administer the surveys Intervention: Yes Findings of survey were used to guide the intervention Dissemination: Committee members served as coauthors, developing and distributing the report to the community Outcomes: No

Evidence Table 2. East Side Village Health Worker Partnership: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Schulz AJ, Parker EA, et al., 1998* van Olphen J, Schulz A, et al., 2003 Becker AB, Israel BA, et al., 2002 Israel BA, Farquhar SA, et al., 2002 Schulz AJ, Parker EA, et al., 2002 Parker EA, Lichtenstein RL, et al., 2001 Parker EA, Schulz AJ, et al., 2001 Schulz AJ, Israel BA, et al., 2001 Schulz AJ, Israel BA, et al 2000 Parker EA, Schulz AJ, et al., 1998	Duration: 1995-2003 (8 years) Nature of Community Involvement: • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified	Yes Steering Committee developed survey and selected intervention sites	Yes • Questionnaire was pretested and revised by the Steering Committee • On Steering Committee's suggestion, respondents were given a copy of the local resource directory and a small gift certificate • Community interviewers were able to encourage community members to participate

* Primary article for this study

Evidence Table 2. East Side Village Health Worker Partnership: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Sociodemographics Addressed: Yes Local minimarkets held at community establishments offered fruits and vegetables at lower prices	Yes Researchers agreed to implement intervention sooner than intended after renegotiations with the Steering Committee	Yes • VHWs received training and a honorarium • East Side Village Health Workers Partnership (ESVHWP) obtained a small grant to train VHWs about diabetes • Detroit Health Department established formal links with YANA to address violence in the community and committed ongoing funding support • Community members hired and trained as interviewers	Dissemination of Findings: Yes Steering Committees evaluated and discussed findings; results were discussed at regularly scheduled meeting, special community events, and Partnership retreats Application of Findings: Yes Findings of survey were used to guide the intervention Sustainability of Interventions: No Intervention ongoing

Evidence Table 2. Elderly in Need: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Moyer A, Coristine M, MacLean L, et al., 1999 Moyer A, Coristine M, Jamault M, et al., 1999 Funder: Ottawa Carlton Health Department, Community Health Research Unit Funding Period: NR Study Name: Elderly In Need	Research Objective: To assess needs and design and test interventions to integrate them into the community	Study Design: Nonexperimental, exploratory Duration of Study: 3 years Setting: French-speaking area, Canada	Intervention: • Individual interventions through public health nurses focusing on empowering the client • Interventions on community levels to increase outreach to elderly residents Duration of Intervention: 3 years

Evidence Table 2. Elderly in Need: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Elderly persons (>75 years), living alone and not receiving nursing services Sampling Strategy: Nonprobability Sample Size: 101 Response Rate at Each Measure: 92 Retention Rate: NR	Primary Variables Measured: • Physical Self Maintenance Scale • Instrumental Activities of Daily Living Data Collection Methods: Quantitative: Functional capacity Qualitative: Field notes, semistructured interviews	Other Variables Measured: • Social support • Social ties	Intervention Effects: Effectiveness of the intervention was not assessed Study results: • Profile of older people in need • 3 patterns of inadequate social networks	Methodology: No Measures: No Recruitment: No Intervention: No Dissemination: No Outcomes: No

Evidence Table 2. Elderly in Need: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Moyer A, Coristine M, MacLean L, et al., 1999 Moyer A, Coristine M, Jamault M, et al., 1999	Duration: 3 years Nature of Community Involvement: • Recruitment and retention • Intervention development, implementation	NR	No

Evidence Table 2. Elderly in Need: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	Yes All visits were conducted in the clients' language of choice	Yes Project team provided skill training workshop for church volunteers	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: No

Evidence Table 2. Haida Gwaii Diabetes Project: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Herbert, 1996 Funder: British Columbia Health Research Foundation Funding Period: NR Study Name: Haida Gwaii Diabetes Project	Research Objective: Develop culturally sensitive approaches to the prevention and management of diabetes in the Haida people and implement these approaches while monitoring quantitative and qualitative outcomes	Study Design: NR Duration of Study: NR Setting: Two villages (Skidegate and Old Massett) with mostly aboriginal populations in the Queen Charlotte Islands/Haida Gwaii, British Columbia, Canada	Intervention: NR, except for 2 examples: a walking group, and a group to gather traditional foods Duration of Intervention: 12 months

Evidence Table 2. Haida Gwaii Diabetes Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: NR (not specifically reported, but appears to be the entire population of both villages) Sampling Strategy: NR Sample Size: NR Response Rate at Each: NR Retention Rate: NR	Primary Variables Measured: NR Data Collection Methods: NR	Determinants of Intervention Effects: NR	Intervention Effects: NR	Methodology: NR Measures: Choice of diabetes as intervention target based on input from community health representatives (some topics, such as alcoholism, are “highly charged,” and might have resulted in community resistance) Recruitment: NR Intervention: NR Dissemination: NR Outcomes: NR

Evidence Table 2. Haida Gwaii Diabetes Project: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Herbert, 1996	Duration: NR Nature of Community Involvement: • Selection of research question • Financial responsibility for grant funds • Measurement instruments and data collection • Intervention development, implementation • Dissemination of findings	Research team's working principles: • All members of research team are equal partners • All manuscripts reviewed by all members of team • Data belong to participants and will be returned to them • Analyses discussed with community health representatives (CHRs) • Analyses discussed with key community members • If community opposes publication, results only reported to funding agency Health or social issues raised due to research will be addressed	Yes Working principles in shared decisionmaking column were established to relieve concerns of the CHRs regarding acting as intermediaries in another research project

Evidence Table 2. Haida Gwaii Diabetes Project: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
<u>Assessed:</u> No <u>Addressed:</u> No	NA	Yes CHRs used focus groups as a tool to decide how to use other funds	<u>Dissemination of Findings:</u> Yes Community reviewed all publications and researchers agreed to publish results only if the community approved <u>Application of Findings:</u> No <u>Sustainability of Interventions:</u> Yes Statements by community leaders of commitment to and belief in the value of research

Evidence Table 2. Healthy Home, Healthy Child: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Green L, Fullilove M, et al., 2002* Perera FP, Illman SM, et al., 2002 Evans DT, Fullilove MT, et al., 2002 Funder: National Institute of Environmental Health Sciences US Environmental Protection Agency Funding Period: NR Study Name: Healthy Home, Healthy Child	Research Objective: To develop, implement, and evaluate a community-wide intervention to increase awareness of environmental health hazards; these articles describe studies at the beginning and during the program	Study Design: Nonexperimental Duration of Study: Focus groups: 12/1998 to 7/1999 Survey: 8/1999 to 12/1999 Setting: Northern Manhattan, South Bronx	Intervention: Community education campaign to increase local residents' awareness of environmental health threats and protective techniques Duration of Intervention: NR

* Primary article for this study

Evidence Table 2. Healthy Home, Healthy Child: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
<u>Participants:</u> Focus groups: Residents with at least one child living in their home Survey: Mothers between 18 and 35, mainly African American and Latinas <u>Sampling Strategy:</u> Nonprobability Focus groups: Self selection, snowball sampling Survey: Convenience sampling <u>Sample Size:</u> Focus groups: 103 Survey: 555 <u>Response Rate at Each Measure:</u> NR <u>Retention Rate:</u> NA	<u>Primary Variables Measured:</u> No predefined variables specified <u>Data Collection Methods:</u> Qualitative: Focus groups using an interview guide Quantitative: Survey	<u>Other Variables Measured:</u> Focus groups tested the relevancy of 5 strategies to reduce the risk of exposure to environmental hazards to children Survey assessed women's awareness of environmental health risks associated with the Healthy Home, Healthy Child campaign and protective actions they take to reduce the risks	<u>Intervention Effects:</u> Not fully reported, but respondents had high levels of awareness of the health risks targeted by the campaign <u>Results of Analysis:</u> • Control environmental tobacco smoke • Eat balanced meals with family • Prevent exposure to lead • Control pests safely • Fight drug and alcohol abuse • Manage garbage properly • Join a clean air campaign	<u>Methodology:</u> No <u>Measures:</u> No <u>Recruitment:</u> No <u>Intervention:</u> Yes Findings of the focus groups shaped the intervention campaign <u>Dissemination:</u> No <u>Outcomes:</u> No

Evidence Table 2. Healthy Home, Healthy Child: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Green L, Fullilove M, et al., 2002* Perera FP, Illman SM, et al., 2002 Evans D, Fullilove MT, et al., 2002	Duration: NR Nature of Community Involvement: • Selection of research question • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Application of findings to health concern identified	Yes Focus group and survey results were discussed with the Community Advisory Board and shaped the focus of the intervention campaign	Yes Participants were reimbursed for travel expenses and compensated for their time

* Primary article for this study

Evidence Table 2. Healthy Home, Healthy Child: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Demographic information was obtained Addressed: No	Yes Additional topics were added to the campaign (e.g., garbage, fighting drugs) due to concerns of the community	Yes Researchers trained members of the Community Advisory Board Cooperation and contact with researchers helped to dissolve some barriers to better health care in the community	Dissemination of Findings: No Application of Findings: Yes Focus group and survey results were discussed with the Community Advisory Board and shaped the focus of the intervention campaign Sustainability of Interventions: No

Evidence Table 2. Kahnawake Schools Diabetes Prevention Project: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Macaulay AC, Paradis G, et al., 1997* Potvin L, Cargo M, et al., 2003 Macaulay AC, Cross EJ, et al., 1998 Macaulay AC, Delormier T, et al., 1998 McComber AM, Macaulay AC, et al., 1996 Funder: Health Canada, Quebec Ministry of Health and Social Services Funding Period: NR Study Name: Kahnawake Schools Diabetes Prevention Project	Research Objective: Program Objective: To decrease the future occurrence of Diabetes Mellitus, reduce high-fat diets, and increase physical activity	Study Design: Nonexperimental exploratory Duration of Study: 3 years Setting: Montreal, Canada	Intervention: Elementary school-based program with a variety of activities to promote healthy lifestyles Duration of Intervention: 3 years

* Primary article for this study

Evidence Table 2. Kahnawake Schools Diabetes Prevention Project: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Elementary school children grades 1 to 6 Sampling Strategy: Nonprobability: Convenience Sample Size: 458 Response Rate at Each Measure: 87% Retention Rate: NR	Primary Variables Measured: • Variables that assess fitness and body composition • Eating habits • Physical activity patterns Data Collection Methods: Quantitative: • Survey • Anthropometric measurements	Other Variables Measured: • Self efficacy • Perceived parental support	Intervention Effects: NR (only baseline data reported)	Methodology: No Measures: Yes Diminished research quality; researchers could not publish a comparison of data of intervention group with control group Recruitment: No Intervention: No Dissemination: No Outcomes: No

Evidence Table 2. Kahnawake Schools Diabetes Prevention Project: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Macaulay AC, Paradis G, et al., 1997* Potvin L, Cargo M, et al., 2003 Macaulay AC, Cross EJ, et al., 1998 Macaulay AC, Delormier T, et al., 1998 McComber AM, Macaulay AC, et al., 1996	Duration: 3 years Nature of Community Involvement: • Selection of research question • Proposal development • Financial responsibility for grant funds • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified	Community Advisory Board was involved throughout the study A Code of Research Ethics was developed specifying the community as full partners in all aspects of the research	Yes Incentives provided for teachers and classes to participate

* Primary article for this study

Evidence Table 2. Kahnawake Schools Diabetes Prevention Project: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	Yes Intervention incorporated traditional learning styles of Native children Project team agreed not to make comparisons of raw data between intervention and control groups	Yes Project members have successfully lobbied for a change in school nutrition policies Project allowed the community to develop knowledge and expertise Academic researchers obtained opportunities for masters' and post-doctoral training	Dissemination of Findings: Yes Project team disseminated findings to the community and at scientific conferences Application of Findings: No Sustainability of Interventions: The project sustained itself past initial funding and identified and obtained additional funding

Evidence Table 2. La Vida: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Maciak BJ, Guzman R, et al. 1999 Funder: CDC Funding Period: NR Study Name: La Vida	Research Objective: Description of a community-based participatory project Project Objective: • To establish a partnership to prevent intimate partner violence • To collect, analyze, and disseminate information on intimate partner violence • To develop, implement and evaluate prevention and intervention activities building on local knowledge and contributing to community capacity	Study Design: Nonexperimental, exploratory Duration of Study: NR Setting: Southwest Detroit	Intervention: Not specified Duration of Intervention: Planned: 5 years

Evidence Table 2. La Vida: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: La Vida partners Sampling Strategy: Nonprobability: Purposive sampling Sample Size: Individual interviews: 15 Response Rate at Each Measure: NR Retention Rate: NA	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: • Individual interviews • Group interviews • Field notes • Content analysis	Determinants of Intervention Effects: No predefined variables specified	Intervention Effects: NA Results of Analysis: Challenges identified: • Maintaining ownership within the Latino community • Lack of trust and respect • Striking a balance between research and action • Lack of knowledge about cultural differences • Lack of funding for development activities Lessons learned: • Maintaining ownership with local communities is essential • Strong and stable leadership within communities is critical • Community partners must demonstrate a long-term commitment • Community diagnosis can help to understand history and cultural context • CBPR efforts must be culturally competent	Methodology: No Measures: NA Recruitment: NA Intervention: NA Dissemination: No Outcomes: No

Evidence Table 2. La Vida: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Maciak BJ, Guzman R, et al., 1999	<u>Duration:</u> At the time the article was written: 2 years Planned: 5 years <u>Nature of Community Involvement:</u> • Selection of research question • Recruitment and retention • Measurement instruments and data collection	Yes Initially a group of community partners made up a community action group to provide oversight; as their commitment grew and their roles evolved, they called themselves first a task force and later a partnership La Vida partners developed the framework for identifying Intimate Partner Violence (IPV) prevention and intervention activities	Yes Lead agency director sought support from other agency directors to deal with factors that hampered earlier attempts to address intimate partner violence

Evidence Table 2. La Vida: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	Yes Researchers ensured that the initiative remained community owned by approaching agencies with Latino leadership and/or experience working with Latina women	Yes Community members received training to serve as cofacilitators for group discussions	Dissemination of Findings: Yes Major themes of the analysis were discussed and revised by participants in the partnership Application of Findings: No Sustainability of Interventions: NA

Evidence Table 2. Mom Empowerment, Too!: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Baldwin JH, Rawlings A, et al., 1999 Funder: Brigham Young University College of Nursing, Research and Scholarship Committee Funding Period: NR Study Name: Mom Empowerment, Too! (ME2)	Research Objective: To identify perceptions and behaviors of participants before and during the ME2 program	Study Design: Nonexperimental Duration of Study: NR Setting: Utah	Intervention: Participatory educational and support program involving a workshop with 16 group sessions, home visits, and case management (support, resource referrals, information); expected outcome of the intervention not clearly stated Duration of Intervention: NR

Evidence Table 2. Mom Empowerment, Too!: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Substance-abusing single or teen mothers Sampling Strategy: NR Sample Size: 42 Response Rate at Each Measure: NA Retention Rate: NA	Primary Variables Measured: Content analysis of sessions suggested 2 major domains: • Risk perceptions and behaviors • Health-promoting perceptions and behaviors Data Collection Methods: Qualitative: focus groups	Other Variables Measured: Participants described the worst and best of their lives before and during the program	Intervention Effects: Participants were able to articulate areas of growth in taking responsibility, learning to trust, and achieving some degree of success in their daily lives, but explicitly reported as an outcome of the program	Methodology: No Measures: No Recruitment: No Intervention: Yes Mutual evaluation of workshops resulted in better supported program outcomes (no details provided) Dissemination: Yes Participants reviewed the data Outcomes: NA

Evidence Table 2. Mom Empowerment, Too!: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Baldwin JH, Rawlings A, et al., 1999	<u>Duration:</u> NR <u>Nature of Community Involvement:</u> • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings	Yes ME2 women collaborated to determine reality-based outcomes for the group (no details provided)	Yes Age-appropriate activities were provided for children of participants to support the discussions their parents were having in the adult workshops

Evidence Table 2. Mom Empowerment, Too!: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: Yes Addressed: Yes Program provided information about medical care, shelter, basic needs	Yes Mutual evaluation of workshops resulted in better supported program outcomes (no details provided)	Yes Women reported areas of growth in taking responsibilities in their daily lives	Dissemination of Findings: Yes Participants reviewed the data Application of Findings: No Sustainability of Findings: No

Evidence Table 2. Nuclear Risk Management for Native Communities: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Quigley D, Handy D, et al., 2000 Funder: National Institute of Environmental Health Sciences Agency for Toxic Substances and Disease Registry Funding Period: NR Study Name: The Nuclear Risk Management for Native Communities Project	Research Objective: To build community capacity for managing the health risks of nuclear contamination	Study Design: Nonexperimental Duration of Study: NR Setting: Nevada, Utah, Southern California	Intervention: Educational activities (workshops, presentations) Duration of Intervention: NR

Evidence Table 2. Nuclear Risk Management for Native Communities: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Native Americans Sampling Strategy: Nonprobability Sample Size: 71 interviews Response Rate at Each Measure: NR Retention Rate: NA	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: • Interviews • Content analysis of interviews	Determinants of Intervention Effects: No predefined variables specified	Intervention Effects: NA Results of Analysis: No themes reported	Methodology: No Measures: No Recruitment: No Intervention: NA Dissemination: No Outcomes: No

Evidence Table 2. Nuclear Risk Management for Native Communities: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Quigley D, Handy D, et al., 2000	<u>Duration:</u> NR <u>Nature of Community Involvement:</u> • Selection of research question • Financial responsibility for grant funds • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings • Application of findings to health concern identified	Yes Community Advisory Committee was recruited for shared decisionmaking Funding was shared between the CBO and the researchers	No

Evidence Table 2. Nuclear Risk Management for Native Communities: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	Yes Researchers shared grant with Citizen Alert Native American Program (CANAP) to enable it to hire staff	Yes • Development of new training and occupational opportunities for native community members • Strengthening of the CANAP organizational stability through additional income and capacity • Researchers learned about native communities	Dissemination of Findings: Yes Community was involved in all levels of the program Application of Findings: Yes Community-based hazard management plan was developed Sustainability of Interventions: No

Evidence Table 2. PACE: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention
Publications: Arcury TA, Austin CK, et al., 1999* Quandt SA, Arcury TA, et al., 2001 Funder: National Institute of Environmental Health Sciences Funding Period: 4 years Study Name: Preventing Agricultural, Chemical Exposure in North Carolina Farmworkers (PACE)	Research Objective: To develop, implement, and disseminate culturally appropriate interventions to reduce chemical exposure among farm-workers	Study Design: Nonexperimental formative research followed by planned intervention evaluated by RCT Duration of Study: 4 years Setting: East-central North Carolina	Intervention: • Training package for pesticide safety • Health promoter workshops Duration of Intervention: NR

* Primary article for this study

Evidence Table 2. PACE: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Farm workers employed in tobacco and cucumber production Sampling Strategy: Nonprobability Snowball sampling Sample Size: Interviews: 26 Response Rate at Each Measure: NR Retention Rate: NA	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: • In-depth interviews • Focus groups	Other Variables Measured: No predefined variables specified During interviews farmworkers described their experiences with and beliefs about agricultural chemicals	Intervention Effects: NR Results of analysis: No themes reported	Methodology: No Measures: No Recruitment: No Intervention: Yes North Carolina Farmworkers' Project (NCFP) staff helped to develop an intervention that was practical and culturally appropriate Dissemination: No Outcomes: NA

Evidence Table 2. PACE: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Arcury TA, Austin CK, et al., 1999* Quandt SA, Arcury TA,et al., 2001	<u>Duration</u>: 4 years <u>Nature of Community Involvement:</u> • Selection of research question • Proposal development • Financial responsibility for grant funds • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings	Yes Initial interactions were through a community-based organization, but later evolved to take place through a Project Advisory Committee comprising farmworkers PACE staff modified the approach of using an onsite health promoter after input from farmworkers	Yes Spanish translation and interpretation were a priority in all domains of participation Researchers looked beyond the community-based organization to expand the range of those participating

Evidence Table 2. PACE: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	Yes Researchers allowed time for socializing during meetings; face-to-face contact was very important for community members Transportation to meetings was arranged by NCFP staff members	Yes Project Advisory Committee members acquired new skills and the organization has built its capacity to undertake future projects, learned to conduct focus groups and in-depth interviews and systematically analyze results; they developed skills for organizing farmworkers	Dissemination of Findings: Yes Project staff made presentations on Committee's meetings Application of Findings: No Sustainability of Interventions: No

Evidence Table 2. PINAH: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Eng E, Parker E, 1994 Funder: Freedom from Hunger, Mississippi State Department of Health, Mississippi Cooperative Extension Agency Funding Period: 5 years (1988-1993) Study Name: The Partners for Improved Nutrition and Health Project (PINAH)	Research Objective: Project objectives: • To improve health-promoting behaviors • To improve outreach and referral patterns of local health and human service agencies • To improve community competence Study objective: Program evaluation of the third intervention (to improve community competence)	Study Design: Program evaluation Duration of Study: NR Setting: Mississippi Delta	Intervention: • Health fairs • Clean-up campaigns • Teen pregnancy • Drug awareness workshops Duration of Intervention: NR

Evidence Table 2. PINAH: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Key informants Sampling Strategy: Nonprobability: Purposive Sample Size: 45 Response Rate at Each Measure: NR Retention Rate: NA	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: Interviews	Other Variables Measured: No predefined variables specified	Intervention Effects: NR Results of analysis: Community competence moved from social interactions internal to communities to those more externally focused	Methodology: No Measures: No Recruitment: Yes Community Health Advisors selected key informants for interviews Intervention: Yes Community Health Advisors helped to interpret preliminary findings and fine-tune project activities Dissemination: No Outcomes No

Evidence Table 2. PINAH: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Eng E, Parker E, 1994	Duration: 5 years Nature of Community Involvement: • Study design • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation • Interpretation of findings • Dissemination of findings	NR	No

Evidence Table 2. PINAH: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: Yes Addresses community competence	No	Yes Community Health Advisors drew up a written strategic plan and presented it to town officials although there was growing opposition from town officials	Dissemination of Findings: Yes Community Health Advisors received preliminary findings at periodic meetings with staff PINAH evaluators sought validation of results through consultation with PINAH staff, Community Health Advisors, and PINAH's Board of Advisors Application of Findings: No Sustainability of Interventions: No

Evidence Table 2. Preventing Halloween Arson: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Maciak BJ, Moore MT, et al., 1998 Funder: NR Funding Period: NR Study Name: Preventing Halloween Arson in an Urban Setting	Research Objective: To describe and evaluate a citywide intervention to curtail arson fires during the Halloween period (This is a retrospective evaluation of a program implemented by city officials in cooperation with communities; researchers were not involved in the planning and implementation of the program)	Study Design: Process evaluation Duration of Study: NR Setting: Detroit	Intervention: • Elimination of arson targets • Deployment of public safety personnel • Youth curfew • Volunteer mobilization • Activities for children and teenagers • Media campaign Duration of Intervention: 1985-1996

Evidence Table 2. Preventing Halloween Arson: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: City officials volunteers Sampling Strategy: Nonprobability: convenience Sample Size: NR Response Rate at Each Measure: NA Retention Rate: NA	Primary Variables Measured: Data on fires, arson fires, number of volunteers Data Collection Methods: Archival data Qualitative: Interviews	Determinants of Intervention Effects: No predefined variables specified	Intervention Effects: Overall decline of reported Halloween fires	Methodology: No Measures: No Recruitment: No Intervention: Yes Decentralized planning to ensure neighborhood relevance Dissemination: No Outcomes: No

Evidence Table 2. Preventing Halloween Arson: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Maciak BJ, Moore MT, et al., 1998	Duration: 11 years Nature of Community Involvement: • Intervention development, implementation	No	No

Evidence Table 2. Preventing Halloween Arson: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	No	No	Dissemination of Findings: No Application of Findings: No Sustainability of Interventions: Yes Intervention is an ongoing program

Evidence Table 2. Survival Guide: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Factor SH, Galea S, et al., 2002* Galea S, Factor SH, et al., 2002 Funder: CDC Funding Period: NR Study Name: NR	Research Objective: To develop a guide to provide informational support for substance users to improve access to community services To gather information about substance users' perceptions of access to and information about services (An RCT is planned to determine the effectiveness of the intervention in improving knowledge and access to services; articles describe programs prior to the development of the survival guide)	Study Design: Nonexperimental formative research followed by intervention, evaluated through an RCT Duration of Study: 6 months Setting: East and Central Harlem	Intervention: Survival guide for substance users to provide connections to treatment services Duration of Intervention: NR

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* Primary article for this study

Evidence Table 2. Survival Guide: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Substance users older than age 18 in East and Central Harlem Sampling Strategy: Service providers: List of key informants provided by community liaison Drug users: Convenience and snowball sampling Sample Size: Service providers: 91 Drug users: 353 Response Rate at Each Measure: Service providers: 25% Drug users: NA Retention Rate: NA	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: Focus groups Quantitative: Surveys	Other Variables Measured: No predefined variables specified Focus groups discussed the design and content of the survival guide	Intervention Effects: NA Results of Analysis of Focus Groups: • Participants favored idea of a pocket-sized “survival guide” in bold colors and with forthright language • Need for legal services • Information about medical services • Information about job and educational opportunities • Need for emotional support • Inspirational messages based on success stories Survey Results: • 45% have difficulties accessing job services • 35% have difficulties accessing housing services, 17% medical services, 10% education, 8% drug-related services • Lack of information and too much paperwork were identified as main barriers	Methodology: No Measures: Survey instrument developed in collaboration with Community Advisory Board (CAB) Recruitment: No Intervention: Yes Substance users determined the content and appearance of the guide Dissemination: No Outcomes: No

Evidence Table 2. Survival Guide: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Factor SH, Galea S, et al., 2002* Galea S, Factor SH, et al., 2002	<u>Duration:</u> NR <u>Nature of Community Involvement:</u> • Selection of research question • Recruitment and retention • Measurement instruments and data collection • Intervention development, implementation	Yes CAB contributed to identification of priorities and design of intervention	Yes Focus group participants were reimbursed $20 for their time and were offered refreshments and free transportation Survey participants were given $15 as compensation

* Primary article for this study

Evidence Table 2. Survival Guide: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
<u>Assessed:</u> Yes Demographic characteristics were assessed in interviews <u>Addressed:</u> Not in formative phase (intervention will provide information on accessing services)	Yes Initially the guide was targeting service providers; CAB members felt that the guide should be developed for substance users themselves; subsequently substance users determined the content and appearance of the guide	Yes The involvement of substance users in the guide development gave them an opportunity to build social support	<u>Dissemination of Findings:</u> No <u>Application of Findings:</u> Yes Results of surveys and focus groups were used for the design of the survival guide <u>Sustainability of Interventions:</u> No

Evidence Table 2. Women and Heart Disease: Research Components

Authors, Funder, Funding Period, Study Name (If applicable)	Research Objectives	Study Design, Duration, Setting	Intervention, Duration
Publications: Arthur HM, Wright DM, et al., 2001 Funder: NR Funding Period: NR Study Name: Women and Heart Disease	Research Objective: To develop and implement a community-based communication and psycho-educational support group for women living with heart disease	Study Design: Nonexperimental, exploratory Duration of Study: 1 year Setting: Ontario, Canada	Intervention: Telephone communication network, and monthly 2-hour group sessions Duration of Intervention: 5 months

Evidence Table 2. Women and Heart Disease: Research Components (continued)

Participants, Sampling Strategy, Sample Size, Response Rate, Retention Rate	Primary Outcome Variables Measured, Data Collection Methods	Other Variables Measured	Intended and Unintended Effects of Intervention	Evidence of Enhanced or Diminished Research Quality Due to CBPR
Participants: Women identified from daily hospital admission lists of patients who had MI, coronary artery bypass graft surgery, or percutaneous transluminal coronary angioplasty within the past 6 months or angina during the previous year Able to speak, read and understand English Sampling Strategy: Consecutive sample of women Sample Size: 20 women: 10 in group 1 and 10 in group 2 Response Rate at Each Measure: NA Retention Rate: Group 1: 9/10 Group 2: 7/10	Primary Variables Measured: No predefined variables specified Data Collection Methods: Qualitative: Focus groups	Other Variables Measured: • Evaluation of the telephone network • Diary entries about experiences living with heart disease both within and outside of the group	Intervention Effects: NR Findings: • Identified a current deficit in both institutional and community-based health care in terms of dealing with women's issues related to living with heart disease • Telephone network difficult to use in practice • Identified stress of living with heart disease and associated family pressures and the need for support and information related to heart disease, medical management, and communication with physicians as major issues	Methodology: No Measures: Participants generate issues being examined Recruitment: No Intervention: Participants codesigned the program that they thought would be of the most benefit to other women living with heart disease Dissemination: No Outcomes: Summaries of sessions were provided to the women who were given the opportunity to accept, reject, or refine the investigators' interpretations

Evidence Table 2. Women and Heart Disease: Community-Based, Participatory Components

Authors	Duration and Nature of Community Involvement	Evidence of Shared Decisionmaking Between Researchers and the Community	Evidence That Study Is Designed to Remove Prior Barriers to Research Participation
Arthur HM, Wright DM, et al., 2001*	Duration: NR Nature of Community Involvement: • Dissemination of findings • Intervention development, implementation • Interpretation of findings	Yes Summaries of sessions were provided to the women who were given the opportunity to accept, reject, or refine the investigators' interpretations Participants codesigned the program that they thought would be of the most benefit to other women living with heart disease Consensus-driven issue identification continued throughout the monthly group meetings	No

* Primary article for this study

Evidence Table 2. Women and Heart Disease: Community-Based, Participatory Components (continued)

Evidence That Socioeconomic Determinants of Health Are Addressed	Evidence That the Research Team Was Flexible to Community Needs and Priorities During Research Implementation	Evidence That the Research Effort Contributed to Individual or Community Capacity Building	Evidence That the Research Findings Were Used or Intended to Be Used to Address the Original Health Concern
Assessed: No Addressed: No	Yes Participants codeveloped program that they thought would be most beneficial to women	Yes Participants felt both supported and supportive during the group process; no evidence of community capacity building	Dissemination of Findings: Yes Findings were disseminated to participants who were given the opportunity to accept, reject, or refine the investigators' interpretations Application of Findings: The authors state that an ongoing community-based support group for women with heart disease may enhance coping, but no indication of continuation of the groups Sustainability of intervention: No

Evidence Table References

Ammerman A, Washington C, Jackson B, et al. The PRAISE! Project: A church-based nutrition intervention designed for cultural appropriateness, sustainability and diffusion. J Health Promotion Pract 2002; 3(2):286-301.

Angell KL, Kreshka MA, McCoy R, et al. Psychosocial intervention for rural women with breast cancer. J Gen Intern Med 2003; 18(7):499-507.

Arcury TA, Austin CK, Quandt SA, et al. Enhancing community participation in intervention research: farmworkers and agricultural chemicals in North Carolina. Health Educ Behav 1999; 26(4):563-78.

Arthur HM, Wright DM, Smith KM. Women and heart disease: the treatment may end but the suffering continues. Can J Nurs Res 2001; 33(3):17-29.

Baker EA, Israel BA, Schurman SJ. A participatory approach to worksite health promotion. J Ambul Care Manage 1994; 17(2):68-81.

Baldwin JH, Rawlings A, Marshall ES, et al. Mom empowerment, too! (ME2): a program for young mothers involved in substance abuse. Public Health Nurs 1999; 16(6):376-83.

Banner RO, DeCambra H, Enos R, et al. A breast and cervical cancer project in a native Hawaiian community: Wai'anae cancer research project. Prev Med 1995; 24(5):447-53.

Becker AB, Israel BA, Schulz AJ, et al. Predictors of perceived control among African American women in Detroit: exploring empowerment as a multilevel construct. Health Educ Behav 2002; 29(6):699-715.

Chen AM, Wismer BA, Lew R, et al. 'Health is strength': a research collaboration involving Korean Americans in Alameda County. Am J Prevent Med 1997; 13(6 Suppl):93-100.

Clark NM, Brown RW, Parker E, et al. Childhood asthma. Environ Health Perspect 1999; 107 Suppl 3:421-9.

Corbie-Smith G, Ammerman AS, Katz ML, et al. Trust, benefit, satisfaction, and burden: a randomized controlled trial to reduce cancer risk through African-American churches. J Gen Intern Med 2003; 18(7):531-41.

Daniel M, Green LW, Marion SA, et al. Effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada. Soc Sci Med 1999; 48(6):815-32.

Eng E, Parker E. Measuring community competence in the Mississippi Delta: the interface between program evaluation and empowerment. Health Educ Q 1994; 21(2):199-220.

Evans DT, Fullilove MT, Green L, et al. Awareness of environmental risks and protective actions among minority women in Northern Manhattan. Environ Health Perspect 2002; 110 Suppl 2:271-5.

Factor SH, Galea S, de Duenas Geli LG, et al. Development of a "survival" guide for substance users in Harlem, New York City. Health Educ Behav 2002; 29(3):312-25.

Flaskerud JH, Calvillo ER. Beliefs about AIDS, health, and illness among low-income Latina women. Res Nurs Health 1991; 14(6):431-8.

Flaskerud JH, Nyamathi AM. Collaborative inquiry with low-income Latina women. J Health Care Poor Underserv 2000; 11(3):326-42.

Flaskerud JH, Nyamathi AM. Home medication injection among Latina women in Los Angeles: implications for health education and prevention. AIDS Care 1996; 8(1):95-102.

Flaskerud JH, Nyamathi AM, Uman GC. Longitudinal effects of an HIV testing and counseling programme for low-income Latina women. Ethn Health 1997; 2(1-2):89-103.

Flaskerud JH, Uman G, Lara R, et al. Sexual Practices, Attitudes and Knowledge Related to HIV Transmission in Low Income Los Angeles Hispanic Women. J Sex Res 1996; 33(4):343-53.

Galea S, Factor SH, Palermo AG, Aaron D, Canales E, Vlahov D. Access to resources for substance users in Harlem, New York City: Service provider and client perspectives. Health Educat Behav 2002; 29(3):296-311.

Gotay CC, Banner RO, Matsunaga DS, et al. Impact of a culturally appropriate intervention on breast and cervical screening among native Hawaiian women. Prev Med 2000; 31(5):529-37.

Green L, Fullilove M, Evans D, et al. "Hey, mom, thanks!": use of focus groups in the development of place-specific materials for a community environmental action campaign. Environ Health Perspect 2002; 110 Suppl 2:265-9.

Green LW, Levine DM, Deeds S. Clinical Trials of Health Education for Hypertensive Outpatients: Design and Baseline Data. Prev Med 1975; 4:417-25.

Heaney CA, Israel BA, Schurman SJ, et al. Industrial Relations, Worksite Stress Reduction, and Employee Well-Being: A Participatory Action Research Investigation. J Org Behav 1993; 14(5):495-510.

Herbert CP. Community-based research as a tool for empowerment: the Haida Gwaii Diabetes Project example. Can J Pub Health 1996; 87(2):109-12.

Hugentobler MK, Israel BA, Schurman SJ. An action research approach to workplace health: Integrating methods. Health Educat Q 1992; 19(1):55-76.

Israel BA, Farquhar SA, Schulz AJ, et al. The relationship between social support, stress, and health among women on Detroit's East Side. Health Educ Behav 2002; 29(3):342-60.

Israel BA, Schurman SJ, House JS. Action research on occupational stress: involving workers as researchers. Int J Health Serv 1989; 19(1):135-55.

Israel BA, House JS, Schurman SJ, et al. The relation of personal resources, participation, influence, interpersonal relationships and coping strategies to occupational stress, job strains and health: a multivariate analysis. Work Stress 1989; 3(2):163-94.

Israel BA, Schurman SJ, Hugentobler MK. Conducting Action Research: Relationships Between Organization Members and Researchers. J App Behav Science 1992; 28(1):74-101.

Keeler GJ, Dvonch T, Yip FY, et al. Assessment of personal and community-level exposures to particulate matter among children with asthma in Detroit, Michigan, as part of Community Action Against Asthma (CAAA). Environ Health Perspect 2002; 110 Suppl 2:173-81.

Kegler MC, Malcoe LH, Lynch RA, et al. A community-based intervention to reduce lead exposure among Native American children. Environ Epidemiol Toxicol 2000; 2:121-32.

Koopman C, Angell K, Turner-Cobb JM, et al. Distress, coping, and social support among rural women recently diagnosed with primary breast cancer. Breast J 2001; 7(1):25-33.

Krieger JW, Castorina JS, Walls ML, et al. Increasing influenza and pneumococcal immunization rates: a randomized controlled study of a senior center-based intervention. Am J Prev Med 2000; 18(2):123-31.

Krieger JW, Song L, Takaro TK, et al. Asthma and the home environment of low-income urban children: preliminary findings from the Seattle-King County healthy homes project. J Urban Health 2000; 77(1):50-67.

Lam TK, McPhee SJ, Mock J, et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. J Gen Intern Med 2003; 18(7):516-24.

Levine DM, Becker DM, Bone LR, et al. A Partnership with Minority Populations: A Community Model of Effectiveness Research. Ethnic Dis 1992; 2:296-305.

Levine DM, Lawrence WG, Deeds SG, et al. Health Education for Hypertensive Patients. J Am Med Assoc 1979; 241(16):1700-3.

Macaulay AC, Cross EJ, Delormier T, Potvin L, Paradis G, McComber A. Developing a Code of Research Ethics for research with a Native community in Canada: a report from the Kahnawake Schools Diabetes Prevention Project. Int J Circumpolar Health 1998; 57 Suppl 1:38-40.

Macaulay AC, Delormier T, McComber AM, et al. Participatory research with native community of Kahnawake creates innovative Code of Research Ethics. Can J Pub Health 1998; 89(2):105-8.

Macaulay AC, Paradis G, Potvin L, et al. The Kahnawake Schools Diabetes Prevention Project: intervention, evaluation, and baseline results of a diabetes primary prevention program with a native community in Canada. Prev Med 1997; 26(6):779-90.

Maciak BJ, Guzman R, Santiago A, Villalobos G, Israel BA. Establishing LA VIDA: a community-based partnership to prevent intimate violence against Latina women. Health Educ Behav 1999; 26(6):821-40.

Maciak BJ, Moore MT, Leviton LC, et al. Preventing Halloween arson in an urban setting: a model for multisectoral planning and community participation. Health Educ Behav 1998; 25(2):194-211.

Masi CM, Suarez-Balcazar Y, Cassey MZ, et al. Internet access and empowerment: a community-based health initiative. J Gen Intern Med 2003; 18(7):525-30.

Matsunaga DS, Enos R, Gotay CC, et al. Participatory research in a Native Hawaiian community. The Wai'anae Cancer Research Project. Cancer 1996; 78(7 Suppl):1582-6.

McComber AM, Macaulay AC, Kirby R, et al. The Kahnawake Schools Diabetes Prevention Project: community participation in a diabetes primary prevention research project. Int J Circumpolar Health 1998; 57 Suppl 1:370-4.

Morisky DA, Levine DM, Green LW, et al. Five-year blood pressure control and mortality following health education for hypertensive patients. Am J Pub Health 1983; 73(2):153-62.

Moyer A, Coristine M, Jamault M, Roberge G, O'Hagan M. Identifying older people in need using action research. J Clin Nurs 1999; 8(1):103-11.

Moyer A, Coristine M, MacLean L, Meyer M. A model for building collective capacity in community-based programs: the Elderly in Need Project. Pub Health Nurs 1999; 16(3):205-14.

Parker EA, Israel BA, Williams M, et al. Community action against asthma: examining the partnership process of a community-based participatory research project. J Gen Intern Med 2003; 18(7):558-67.

Parker EA, Lichtenstein RL, Schulz AJ, et al. Disentangling measures of individual perceptions of community social dynamics: results of a community survey. Health Educ Behav 2001; 28(4):462-86.

Parker EA, Schulz AJ, Israel BA, Hollis R. Detroit's East Side Village Health Worker Partnership: community-based lay health advisor intervention in an urban area. Health Educ Behav 1998; 25(1):24-45.

Perera FP, Illman SM, Kinney PL et al. The challenge of preventing environmentally related disease in young children: community-based research in New York City. Environ Health Perspect 2002; 110(2):197-204.

Potvin L, Cargo M, McComber AM, et al. Implementing participatory intervention and research in communities: lessons from the Kahnawake Schools Diabetes Prevention Project in Canada. Soc Sci Med 2003; 56(6):1295-305.

Quandt SA, Arcury TA, Pell AI. Something for everyone? A community and academic partnership to address farmworker pesticide exposure in North Carolina. Environ Health Perspect 2001; 109 Suppl 3:435-41.

Quigley D, Handy D, Goble R, Sanchez V, George P. Participatory research strategies in nuclear risk management for native communities. J Health Communic 2000; 5(4):305-31.

Rosenberg Z, Findley S, McPhillips S, et al. Community-based strategies for immunizing the “hard-to-reach” child: the New York State immunization and primary health care initiative. Am J Prev Med 1995; 11(3 Suppl):14-20.

Schulz AJ, Israel B, Williams D, et al. Social inequalities, stressors and self reported health status among African American and white women in the Detroit metropolitan area. Soc Sci Med 2000; 51(11):1639-53.

Schulz AJ, Israel BA, Becker AB, et al. “It’s a 24-hour thing ... a living-for-each-other concept”: identity, networks, and community in an urban village health worker project. Health Educ Behav 1997; 24(4):465-80.

Schulz AJ, Israel BA, Parker EA, Lockett M, Hill Y, Wills R. The East Side Village Health Worker Partnership: integrating research with action to reduce health disparities. Public Health Rep 2001; 116(6):548-57.

Schulz AJ, Parker EA, Israel BA, Allen A, Decarlo M, Lockett M. Addressing social determinants of health through community-based participatory research: the East Side Village Health Worker Partnership. Health Educ Behav 2002; 29(3):326-41.

Schulz A, Parker E, Israel DB, et al. Social context, stressors, and disparities in women's health. J Am Med Womens Assoc 2001; 56(4):143-9.

Schulz AJ, Parker EA, Israel BA, Becker AB, Maciak BJ, Hollis R. Conducting a participatory community-based survey for a community health intervention on Detroit's east side. J Pub Health Manag Pract 1998; 4(2):10-24.

Schurman SJ. Making the 'new American workplace' safe and healthy: a joint labor-management-researcher approach. Am J Indust Med 1996; 29(4):373-7.

Stevens PE, Hall JM. Participatory action research for sustaining individual and community change: a model of HIV prevention education. AIDS Educ Prevent 1998; 10(5):387-402.

Stevens PE. HIV Prevention Education for Lesbians and Bisexual Women: A Cultural Analysis of a Community Intervention. Soc Sci Med 1994; 39(11):1565-78.

van Olphen J, Schulz A, Israel B, et al. Religious involvement, social support, and health among African-American women on the east side of Detroit. J Gen Intern Med 2003; 18(7):549-57.

Wagenaar AC, Murray DM, Gehan JP, et al. Communities mobilizing for change on alcohol: outcomes from a randomized community trial. J Stud Alcohol 2000; 61(1):85-94.

Wagenaar AC, Murray DM, Toomey TL. Communities mobilizing for change on alcohol (CMCA): effects of a randomized trial on arrests and traffic crashes. Addiction 2000; 95(2):209-17.

Wagenaar AC, Toomey TL, Murray DM, et al. Sources of alcohol for underage drinkers. J Stud Alcohol 1996; 57(3):325-33.

Wagenaar AC, Murray DM, Wolfson M, et al. Communities Mobilizing for Change on Alcohol: Design of a Randomized Community Trial. J Comm Psychol 1994; Special Issue:79-101.

Wagenaar AC, Perry CL. Community Strategies for the Reduction of Youth Drinking: Theory and Application. J Res Adolesc 1994; 4(2):319-45.

Wagenaar AC, Gehan JP, Jones Webb R, et al. Communities Mobilizing for Change on Alcohol: Lessons and results from a 15-community randomized trial. J Comm Psychol 1999; 27(3):315-26.

Wismer BA, Moskowitz JM, Chen AM, et al. Mammography and clinical breast examination among Korean American women in two California counties. Prev Med 1998a; 27(1):144-51.

Wismer BA, Moskowitz JM, Chen AM, et al. Rates and independent correlates of Pap smear testing among Korean-American women. Am J Public Health 1998b; 88(4):656-60.

Wismer BA, Moskowitz JM, Min K, et al. Interim assessment of a community intervention to improve breast and cervical cancer screening among Korean American women. J Public Health Manag Pract 2001; 7(2):61-70.

Appendix D
Expert Meeting Attendees/ Technical Expert Advisory Group Members / Peer Review

Community-Based Participatory Expert Meeting Attendees

We extend our appreciation to the members of our Community-Based Participatory Expert Meeting attendees who provided us with advice and input at the initiation of our project. Their guidance was invaluable in setting the direction of our review.

Name	**Affiliation**
Allex Allen, III, MSA	AJA Consulting Princeton, NJ
Alice S. Ammerman, DrPH, RD	‡RTI-UNC EPC Co-Scientific Director Chapel Hill, NC
Gwen Bampfield-Wright, JD, MSW	SC HIV Prevention Community Planning Group and The ACCESS Network Ridgeland, SC
Timothy Carey, MD, MPH	RTI-UNC EPC, Co-EPC Director Chapel Hill, NC
Susan C. Clark, MPH, CHES	Centers for Disease Control and Prevention Public Health Program Office Atlanta, GA
Felicia Collins, MD, MPH	Office of Data, Evaluation, Analysis and Research Health Resources and Services Administration Bethesda, MA
Margaret Coopey, RN, MGA, MPS	Agency for Health Research and Quality Task Order Officer Rockville, MD
Eugenia Eng, MPH, DrPH	RTI-UNC EPC Co-Scientific Director Chapel Hill, NC
Kaytura Felix-Aaron, MD	Center for Primary Care Research Agency for Healthcare Research and Quality Rockville, MD
Benjamin Fraticelli, MDiv, MPH	Community Health Academy Oakland, CA
Elmer Freeman, PhD, MSW	Center for Community Health Education Research and Services, Inc. Boston, MA
Jack Geiger, MD	Professor Emeritus School of Medicine City University of New York New York, NY
Russell Glasgow, PhD	AMC Cancer Center Canyon City, CO

Name	Affiliation
Derek Griffith, PhD	RTI-UNC EPC Community Health Scholar Chapel Hill, NC
Jon Kerner	Division of Cancer Control and Population Sciences Bethesda, MD
Barbara Israel, DrPH	Department of Health Behavior and Health Education University of Michigan Ann Arbor, MI
Deborah Jones-Saumty,PhD	CEO American Indian Associates Talihina, OK
Siobhan Maty, PhD	RTI-UNC EPC Community Health Scholar Chapel Hill, NC
Meredith Minkler, DrPH	Public Health Department University of California at Berkeley Berkeley, CA
Jesus Ramirez-Valles, MPH, PhD	School of Public Health University of Illinois-Chicago Chicago, IL
Linda Randolph, MD, MPH	DC Developing Families Center Washington, DC
Scott Rhodes, PhD	RTI-UNC EPC Community Health Scholar Chapel Hill, NC
Victor Rubin, PhD	Policy Link Oakland, CA
Barbara Sabol, RN	Program Director W.K. Kellogg Foundation Battle Creek, MI
Jean Schensul, PhD	Institute for Community Research Hartford, CT
Sonya Sutton, BSPH	RTI-UNC EPC RTI Project Manager Research Triangle Park, NC
Monika Suchowierska, MA/BCBA	Department of Developmental and Child Psychology University of Kansas Lawrence, KS
Virginia Taggert	National Heart, Lung, and Blood Institute Bethesda, MD
JoAnn Umilani Tsark, MPH	Papa Ola Lokahi Honolulu, HI
Meera Viswanathan, PhD	RTI-UNC EPC Project Director

Name	Affiliation
	Research Triangle Park, NC
Nada Vydelinguui	Center to Reduce Cancer Health Disparities National Cancer Institute Rockville, MD
Lucille H. Webb, Med	RTI-UNC EPC Community Lead Raleigh, NC
Glenn White, PhD	Associate Professor, Human Development and Family Life University of Kansas Lawrence, KS
Tony L. Whitehead, PhD	Department of Anthropology University of Maryland College Park, MD

Note: ‡ RTI International – University of North Carolina Evidence-based Practice Center

TEAG Members and Peer Reviewers

Technical Expert Advisory Group

We also extend our appreciation to the members of our Technical Expert Advisory Group (TEAG), who provided advice and input during our research process. The RTI-UNC EPC team solicited the views of TEAG members from the beginning of the project. TEAG members also provided insights into and reactions to work in progress and advice on substantive issues or possibly overlooked areas of research. TEAG members participated in refining the analytic framework and key questions and discussing the preliminary assessment of the literature, including inclusion/exclusion criteria, and also provided input on the information and categories, including evidence tables. The TEAG was both a substantive resource and a “sounding board” throughout the study. It was also the body from which expertise was formally sought at several junctions. TEAG members are listed below:

Alex Allen, MSA
AJA Consulting
Princeton, NJ

Gwen Bampfield-Wright, JD,MSW
The Access Network
Ridgeland, SC

Jack Geiger, MD
City University of New Work
School of Medicine
New York, NY

Russell Glasgow, PhD
AMC Cancer Center
Canyon City. CO

Barbara Israel, DrPH
University of Michigan
School of Public Health
Ann Arbor, MI

Deborah Jones-Saumty, PhD
CEO, American Indian Association
Talihina, OK

Meredith Minkler, DrPH
University of California at Berkeley
School of Public Health
Berkeley, CA

Jesus Ramirez-Valles, PhD, MPH
University of Illinois at Chicago
School of Public Health
Chicago, IL

Monika Suchowierska, MA/BCBA
University of Kansas
Lawrence, KS

Glenn White, PhD
University of Kansas
Lawrence, KS

Peer Reviewers

We gratefully acknowledge the following individuals who reviewed the initial draft of this report and provided us with constructive feedback. External reviewers comprised clinicians, researchers, representatives of professional societies, and potential users of the report. We would also like to extend our appreciation to David Atkins, MD, and Kaytura Felix Aaron, MD, from AHRQ for contributing peer review comments. Our peer review panel also includes six members of the TEAG: Alex Allen, Gwen Bampfield-Wright, Barbara Israel, Deborah Jones-Saumty, Mereidith Minkler, and Jesus Ramirez-Valles**.** Peer review was a separate duty for these individuals and not part of their commitment as TEAG members. All are active professionals in the field. The peer reviewers were asked to provide comments on the content, structure, and format of the evidence report and to complete a checklist. The peer reviewers' comments and suggestions formed the basis of our revisions to the evidence report. Acknowledgments are made with the explicit statement that this does not constitute endorsement of the report.

Alex Allen, MSA
AJA Consulting
Princeton, NJ

Ann Beal, MD
Commonwealth Fund
New York, NY

Paul Estabrooks, PhD
Kaiser Permanente
Denver, CO

Deborah Jones-Saumty, PhD
CEO, American Indian Association
Talihina, OK

Jesus Ramirez-Valles, PhD, MPH
University of Illinois at Chicago
School of Public Health
Chicago, IL

Sarena Seifer, MD
Community Campus Partnerships for Health
Seattle, WA

JoAnn Umilani Tsark, MPH
Research Director
Papa Ola Lokahi
Honolulu, HI

Gwen Bampfield-Wright, JD,MSW
The Access Network
Ridgeland, SC

Tom Bruce, MD
University of Arkansas
College of Public Health
Little Rock, AR

Barbara Israel, DrPH
University of Michigan
School of Public Health
Ann Arbor, MI

Meredith Minkler, DrPH
University of California at Berkeley
School of Public Health
Berkeley, CA

Victor Rubin, PhD
Policy Link
Oakland, CA

Shobha Srinivasan, Ph.D.
National Institute of Environmental Health Sciences
Research Triangle Park, NC

Tony Whitehead, PhD
University of Maryland
College Park, MD