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Academic-Community Partnerships: Effectiveness Evaluated Beyond the Ivory Walls

Rosemary M. Caron
University of New Hampshire, Durham, rosemary.caron@unh.edu

Jessica D. Ulrich-Schad
University of New Hampshire

Catherine Lafferty
University of New Hampshire, Durham

Comments

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Academic-Community Partnerships: Effectiveness Evaluated Beyond the Ivory Walls

Rosemary M. Caron, Jessica D. Ulrich-Schad, and Catherine Lafferty

Abstract

Community-based participatory research (CBPR) has furthered our understanding of the working principles required for academic-community partnerships to address persistent public health problems. However, little is known about how effective these partnerships have been in eliminating or reducing community-based public health issues. To contribute to the literature in this area, the authors conducted a survey of U.S. schools and programs in public health and community groups working with these academic partners to: (1) identify the most common local public health issues addressed; (2) examine the characteristics of the partnership and the actual or perceived benefits and challenges for each partner; (3) assess the perceived effectiveness of the partnership and their evaluation techniques; and (4) analyze the intent to continue or dissolve the partnership and the associated factors that influence this decision. The authors provide recommendations that can improve the development, functioning, and effectiveness of academic-community collaborations aimed at addressing a variety of public health concerns.

Introduction

Winslow (1920) defined public health as the following:

> …the science and art of preventing disease, prolonging life and promoting physical health and efficacy through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure every individual in the community a standard of living adequate for the maintenance of health; ... (p. 183).

Winslow's critical work still accurately reflects the mission of public health today. An essential, modern tool in fulfilling the public health mission is the academic-community partnership. Academic-community partnerships are relationships between community organizations and academic institutions with the goal of building the community's capacity to address community-level issues, including public health matters that may affect a population's quality of life (Lesser & Oscos-Sanchez, 2007; O'Fallon & Dearry, 2002.) By engaging multiple stakeholders with common interests in a specific community, these partnerships are better equipped with the financial resources, human and social capital, and organizational resources to address local public health concerns (Green, Daniel, & Novick, 2001; Chaskin, Brown, Venkatesh, & Vidal, 2001).

However, there is limited evidence of the effectiveness of academic-community partnerships in alleviating the public health concerns they seek to address (El Ansari & Weiss, 2006; El Ansari, Phillips & Hammick, 2001; Kreuter, Lezin, & Young, 2000; Wallerstein & Duran, 2006). There have been many studies that document the purpose, or goals, of such partnerships and the best practices required for effective partnerships, but few either systematically or empirically evaluate the impacts of these interventions on public health outcomes. Some studies have assessed the perceived effectiveness of programs in alleviating public health concerns, but even fewer use experimental or quasi-experimental research designs to rigorously test program effectiveness. The studies that have assessed the effectiveness of academic-community partnerships are often focused on a select number of health concerns, lack a truly experimental design in their evaluations, and focus on a small number of communities or particular sub-populations.

The lack of evidence about the effectiveness of academic-community partnerships in addressing public health matters stems in part from the difficulties associated with disentangling the effects of other factors from the effects of the partnerships themselves. For example, it is difficult to discern, without using experimental evaluative methodologies, whether the practices implemented by the collaborations themselves or other extraneous factors, such as changing social norms, economic fluctuations, availability of resources, etc. are having a greater effect. It is also challenging to evaluate the effectiveness of some programs because public health benefits can take a long period of time to be realized (Eisinger & Senturia, 2001; Israel et al., 1998, says 2003 in references; also first reference, list all last names). Additionally, because local contexts matter in community-level research, it can be challenging, and time and resource consuming, to use comparative research methods (e.g., control and experimental groups) to assess program outcomes. Finally, what is defined as an indicator of collaboration success is sometimes up for debate (El Ansari, et al, 2001; Wallerstein & Duran, 2006). Specifically, El Ansari, et al. consider the primary challenges confronting the evidence on effective collaborative efforts to include: the diversity of perspectives, multiplicity of conceptual facets, difficulty in measurement of notions, selectivity of macro- or micro-evaluation, variety of proximal or distal indicators, array of short and long-term effects, assortment of individual-level or collective outcomes, measuring a moving target, suitability of randomized controlled trials, and requirement of mixed methods evaluation.

CBPR is a common method implemented by academic and community partners to address community-level issues. It is defined as:

> …a collaborative approach to research that equitably involves all partners in the research process and

> recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community, has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities. (Kellogg, 2001). (not in References in that form)

CBPR has furthered our understanding of the working principles required for academic-community partnerships to address persistent public health problems together. However, little is known about how effective these academic-community partnerships, particularly those using CBPR, are at eliminating or reducing community-based public health issues. To contribute to the literature in this area, we conducted an online survey of both academic and community partners throughout the U.S. to evaluate: (1) the development and functioning of academic-community partnerships that address public health issues; and (2) the perceived effectiveness of academic-community partnerships in reducing public health issues pertinent to their community. By conducting a survey of both academic and community partners, we gain a better understanding of the local public health issues being addressed, the characteristics of partnerships working to address these issues, including whether the partnership utilizes CBPR principles, and most importantly, whether or not the partnerships have been able to alleviate public health concerns. The overall purpose of this work is to: (1) inform the development and functioning of new collaborative relationships between communities and academic institutions aimed at addressing important community-based issues; and (2) provide recommendations that can improve the effectiveness of academic-community collaborations in solving a variety of public health concerns.

Methods

Survey Sample and Design

To assess the effectiveness of academic-community partnerships in addressing public health concerns, we developed and conducted a formal, online, anonymous survey of directors of all Council on Education for Public Health (CEPH)-accredited schools and programs of public health, as well as leaders of community organizations. Based on an extensive literature review of academic-community partnerships addressing local public health issues, survey questions were prepared regarding the development, functioning, and effectiveness of such partnerships. The surveys were pilot tested among a small group (n=10) of academicians in the public health field and community organization representatives (n=10) across the country. The reviewers provided feedback on survey content and length that improved the content validity of our survey instrument before its implementation. Appendices A and B include the survey instruments for academic and community partners, respectively.

Sampling Methodology

The e-mails for directors of schools and programs of public health were collected from the CEPH website and individual accredited public health program and school websites. The sample of academic partners included 48 directors of CEPH-accredited schools and 82 directors of CEPH-accredited programs in public health in the U.S. The sample of community partners was compiled by sending announcements on publicly available and moderated CBPR listservs for academic-community partnerships. The survey was created by employing SurveyMonkey, an electronic survey tool. The invitation letter to participate in the survey was e-mailed to each director and posted on the CBPR listservs. If directors or community representatives were unable or unwilling to participate, we asked them to refer us to other representatives of their school/organization who were knowledgeable about the partnership(s) their school/organization was involved in. The respondents accessed the survey by clicking on a hyperlink that would open the electronic survey. The participant's responses were downloaded and saved to space designated on the University of New Hampshire's server. The survey took ten to fifteen minutes to complete. We used skip logic to allow respondents to skip over questions that they determined were irrelevant to their situation. Therefore, the denominator for responses to each question only reflects respondents that chose to answer that question.

The survey was implemented during the Spring 2012 semester, traditionally a busy time for academic institutions. The survey remained accessible for respondents to complete for ten weeks. Every two weeks a reminder was e-mailed to directors who had not yet taken the survey. Reminders to complete the survey were also posted every two weeks on the CBPR listservs for leaders of community organizations.

Survey Instrument

The study was approved by the Institutional Review Board at the University of New Hampshire. The survey was comprised of twenty-five various question types including closed- and open-ended questions. While the general content of the survey questions for the academic and community partners were equivalent, question wording varied for appropriateness and context. The survey was divided into six sections comprised of questions that attempted to: 1.) identify the local public health issues being addressed; 2.) examine the characteristics of the partnership; 3.) assess the actual or perceived benefits and challenges for each partner; 4.) determine the perceived effectiveness of the partnership; 5.) assess the methodology implemented by the partnership to determine its success; and 6.) analyze the intent to continue or dissolve the partnership and the associated factors that influence this decision.

Data Analysis

Data from the completed surveys were downloaded and analyzed using Statistical Package for Social Sciences, version 17.0, and Microsoft Excel 2007. Quantitative responses were evaluated using descriptive statistics. Qualitative analysis was used to evaluate open-ended response questions. The text from these responses was examined using content analysis software, QSR NVivo, version 9. Nueundorf (2002) defines content analysis "…as the systematic, objective, quantitative analysis of message characteristics." This method codes the text into manageable categories by theme. Specifically, the responses to the following survey questions were quantified via percentages: identification of partners for both academic institutions and community organizations; main public health issue the partnership is addressing; role of the partner in the partnership; utilization of CBPR principles in the partnership; method of conflict resolution implemented; type of activity necessary to sustain the partnership's work; the types of activities utilized to address the public health issue in the community; partner's perception of a positive outcome in

their community as a result of their partnership; perception of the effectiveness of the partnership; challenges encountered by the partnership; and whether or not the partners planned to continue their partnership. Qualitative analysis for the following survey questions were analyzed via thematic identification: positive outcomes of the partnership; the evaluation of the perceived effectiveness of the partnership; challenges encountered by the partnership; and lessons learned to date from the academic-community partnership. Both quantitative and qualitative results are presented throughout the results section.

Results

One hundred and seventy one survey responses were received: 131 respondents represented academic partners and 40 respondents represented community partners.

Academic partners identified that their community partners (multiple communities in some cases) primarily came from non-profit organizations (55.4%), community coalitions (55.4%), community advisory boards (42.1%), and local health departments (32.2%). Community partners identified that their academic partners (multiple academic partners in some cases) primarily came from schools of public health (47.4%), medical schools (34.2%), programs of public health (23.7%), and departments of community health (26.3%). Academic and community respondents identified chronic disease (15.2%), childhood obesity (11.7%) and access to healthcare (7.0%) as the top three public health issues their partnerships were working to address.

The majority of respondents (academic partners, 69.0%; community partners, 66.7%) reported serving in the role of "convener" for the development of their specific academic-community partnership. Using a closed-ended survey question, about two-thirds of academic partners (72.2%) reported that their partnership operated via CBPR principles, whereas only one-third (33.3%) of community partners reported that their partnership operated via these participatory principles. One academic partner reported that CBPR principles were used in their partnership, "… but not in all phases" of the work. One community respondent stated that "Although academics tend to think in specific content areas, community members think in terms of the whole health of their neighborhoods. Academics interested in this type of work really need to understand this." Furthermore, one-third (33.3%) of community partners engaged in an academic-community partnership reported not knowing about CBPR principles. One community partner reported that "The answer is yes and no [to using CBPR principles] due to the fact that the academic-community partnership does not have a clear understanding of CBPR; and [how to take] the community on as an equal partner." In addition, academic (79.5%) and community partners (61.8%) reported that for conflicts that arose in their partnership, consistent attempts by both partners via face-to-face communication were the main method of resolution. Lastly, for both partners, applying for grants offered by federal agencies was the primary method by which to obtain the resources necessary to conduct their work (academic partner, 68.2%; community partner, 76.5%). Application to funding opportunities from private foundations and organizations was another common approach to acquire the necessary resources (academic partner, 51.8%; community partner, 50.0%).

Table 1 presents the types of activities academic-community partnerships utilized to address public health issues in their community. The most common activities included the use of surveys (60.2%), focus groups (57.9%), interviews (61.4%), and working with healthcare providers (52.0%). Other activities (28.7%) included conducting community forums, implementing leadership training, and intervention development and evaluation.

Table 1. Representative activities academic-community partnerships engage in to address public health issues

Activity	Academic and Community Partners
Surveys	60.2%
Focus Groups	57.9%
Interviews	61.4%
Regular School Meetings	22.2%
Newsletters	18.1%
Media Outlets	19.3%
Work with Legislature	15.2%
Work with Healthcare Providers	52.0%
Other	28.7%

When academic and community partners were asked whether or not they perceived a positive outcome in their community as a result of their partnership, both partners believed there was a greater awareness of the public health issue in the community (academic partner, 79.2%; community partner, 76.5%), as well as opportunities for funding (academic partner, 53.8%; community partner, 47.1%) as a result of their work (Table 2). Other positive outcomes identified by academic and community partners included new legislation, policy development, grant writing skills, peer-reviewed publications, and increased participation community-wide in addressing public health issues. Several respondents reported that their academic-community partnership resulted in an actual outcome of the public health issue being addressed in their community. For example, "…teen pregnancy rates have gone from 50% to 20% [among] high school girls in 4 years"; "declaration of city as HIV disaster area"; "increased

Table 2. Percentage of respondents who reprt positive partnership outcomes

Partnership Outcome	Academic Partner	Community Partner
Greater awareness of public health issue	79.2	76.5
Reduction of exposure to public health issue	10.4	5.9
Elimination of Public Health Issue	2.8	5.9
Continued Funding	53.8	47.1
None	2.8	2.9
Do Not Know	2.8	2.9
Other	38.7	23.5

screening of children for lead exposure"; and a "measurable decrease in substance use in the community in question."

Table 3 illustrates the challenges encountered by academic and community partners. Both partners identified a lack of financial resources (academic partner, 70.2%; community partner, 70.6%), lack of time for the project (academic partner, 51.0%; community partner, 52.9%), and building infrastructure (academic partner, 38.5%; community partner, 29.4%) as the main challenges experienced by their partnership. Additional themes that academic and community partners identified as being challenges to their work included the geographic distance between the academic institution and the community, institutional risk, sustaining involvement, attrition, and lack of acknowledgement of community-based work for academic promotion. One academic respondent shared a specific challenge: "…it's hard to find academic partners who are adequately trained in community engagement, who are culturally competent, and who are able to utilize principles of CBPR and PAR [participatory action research] in a truly collaborative way. Most academic partners remain hierarchical, and some of our more visionary partners are junior faculty who face significant pressure from their tenure committees to stick to 'traditional' research (particularly for fields outside of public health)."

Table 3. Percentage of respondents who report challenges in partnerships

Partnership Challenges	Academic Partner	Community Partner
Lack of Building infrastructure	38.5	29.4
Lack of Community Engagement	21.2	20.6
Implementing CBPR Principles	17.3	29.4
Lack of Financial Resources	70.2	70.6
Lack of Time for Project	51.0	52.9
Lack of Experienced Personnel	18.3	20.6
Other	16.3	11.8

Using an open-ended survey question, academic and community partners were asked to identify how they evaluate the effectiveness of their partnership. Several themes emerged regarding evaluation methods utilized by the partnerships including the number and extent to which partners were involved as determined by their attendance at meetings, types of stakeholders with whom partners were sharing information, increased utilization of services by community members, number of requests to develop partnerships with new partners, and partnership sustainability and retention.

Table 4 presents the overall perceived effectiveness of the respondents' academic-community partnership. The majority of academic and community partners reported that they perceived their partnership to be "somewhat effective" (academic partner, 54.8%; community partner, 55.9%) or "very effective" (academic partner, 24.0%; community partner, 23.5%) at addressing public health issues in their community. One academic respondent stated an actual improvement as a result of their partnership, "We have been able to enhance the knowledge, skills, abilities and competence of our public health workforce. We have also been able to strengthen partnerships between community members. We have been able to build trust of the academic institution in the community. We have been able to bridge public health and primary care."

Table 4. Effectiveness of academic-community partnership at addressing public health issues in the community

Effectiveness	Academic Partner	Community Partner
Very Effective	24.0%	23.5%
Somewhat Effective	54.8%	55.9%
Neither Effective nor Ineffective	2.9%	11.8%
Somewhat Ineffective	0.0%	2.9%
Very Ineffective	4.8%	2.9%
Don't Know	5.8%	2.9%
Other	7.7%	0.0%

Academic and community partners reported that they planned on continuing their partnership in the future (academic partner, 90.6%; community partner, 82.7%). The majority of respondents reported that their partnership had either met some of the objectives it had established (academic partner, 62.1%; community partner, 41.4%) or they were still in the process of meeting their objectives (academic partner, 23.2%; community partner, 31.0%). One academic respondent stated, "Our goal is to establish academic/community partnerships that are on-going, not just based on one project…." Another community respondent stated an actual outcome: "I'd like to say [our goals have been] completely reached, but that would imply there's nowhere to go from here, which is impossible. We've exceeded the goals we've set for ourselves at this point, but are always creating new ones."

Academic and community participants were asked to describe the lessons learned to date from their respective academic-community partnership. The overarching theme that emerged from the participants' responses was the importance of implementing the working principles of CBPR. Other themes included the role of funding, effective communication, adaptability among partners, partners as co-learners, and working from a common ground and towards a common goal. Table 5 highlights these main themes. The academic-community partners were also asked about how their partnership could be more effective. Both partners agreed that accessing more financial resources (academic partner, 55.1%; community partner, 44.8%); accessing more human resources (academic partner, 44.9%; community partner, 34.5%); and spending more time on the project (academic partner, 36.7%; community partner, 17.2%) may improve their effectiveness.

Table 5. Representative Activities Academic-Community Partnerships Engage in to Address Public Health Issues

Theme	Select Quotes
1. CBPR Working Principles (i.e., time, trust, mutual respect)	"Community engagement is more than making a few phone calls to potential partners; it involves continual presence of the academic institution in the community of locale." "Understand clearly the expectations of the community partner, and discuss explicitly the expectations of the academic partner." "Because I have been in this community for several years and have done some past work with the academic partner, I always keep my guard up with them. I do this because of past experience where I felt like they took advantage of the community and the community members and/or they get what the need and they leave. They have the resources and skills to obtain funding for projects but it may not be what the community organization is focusing on or has a need. While this can be viewed positively in that it may stretch the organization to think outside the box, this can/does result in poor sustainability."
2. Partners as co-learners	"Leaving 'titles' at the door is important for leveling the playing field. Everyone at the table learns something; as academic partners we are not there to 'teach' the community partners." "…Successful programs integrate well community and academic knowledge and expertise." "Collaboration takes time! If the process is good the product is great! We all learn a great deal from each other."
3. Establish common ground and goals	"…Given that science and the community frequently have mixed agendas, it is crucial to agree upon common goals and common ground." "Obtain from the academic partnership a detailed account of their requirements before committing to working with them. Clarify in advance roles and expectation of each member of the academic and community team. Take the time to consult with everyone who might have a say in your community/organization before committing to a partnership." "The roles of each partner must be clearly established, agreed upon and frequently re-evaluated to ensure equal and positive engagement."
4. Funding for the establishment of the partnership, development, implementation, and sustainability of the work	"Funding opportunities frequently don't match the needs of the community. A community voice in funding priority decisions is needed." "This work cannot be done effectively without the unconditional support of the University/SPH [School of Public Health] committing to faculty and student participation and funding to get projects well established." "It is hard to sustain programs once funded and research ends, but building on existing community infrastructure and providing adequate resources are critical to success."
5. Effective and ongoing communication	"…Consistent communication is important… Face-to-face and not just e-mail communication is important." "Value of listening. Value of communication. Patience." "build trust first…share results asap…keep open the lines of communication."
6. Adaptability among partners	"Don't give up. Support the community so they can participate fully in all aspects, despite some people kicking and complaining about having to have so many people at meetings and having to get everything translated…" "Remain flexible and remind ourselves that resources and personnel may change mid-project." "Be willing to revise expectations."

Discussion

"They are very time intensive but the outcomes/improvements can be very rich and long-lasting." - Community Respondent

Recent research has evaluated the effectiveness of community partnerships in addressing public health concerns. These studies have focused on issues such as cancer and heart disease, reducing tobacco use (Green, Daniel, & Novick, 2001) and increasing vaccination rates (Coady et al., 2008). Evaluation of the effectiveness of community organizations that partner with academic institutions to address local public health issues are beginning to appear with more frequency in the peer-reviewed literature. One example includes work conducted by Ndirangu, Yadrick, Bogle, & Graham-Kresge (2008) that assessed the effectiveness of academic-community partnerships involved in implementing nutrition interventions in three communities in the Lower Mississippi Delta. A second example is work conducted by Levine, Bone, Hill, Stallings, Gelber, Barker, Harris, Zeger, Felix-Aaron, & Clark (2003) that provides evidence for empirically evaluated positive outcomes of academic-community partnerships in a four year randomized clinical trial investigating the effectiveness of a health center partnership in decreasing the blood pressure levels among an urban African-American population.

Despite the difficulties surrounding the rigorous evaluation of the interventions implemented by academic-community partnerships, our work contributes to this body of knowledge by examining the development and functioning of such partnerships that address public health issues, as well as evaluating their perceived effectiveness in reducing specific public health issues pertinent to the community.

Our findings highlight that academic-community collaborations are comprised of partners that represent multiple aspects of academia (e.g., departments, schools, institutes) and community (e.g., community-based organizations, community advisory boards, health departments). Each partner views the public health issue in the community through a different lens based on their experience, knowledge, skills, and ability. Thus, we propose that each partner involved in the collaboration should have a clear understanding of the expectations and governance of a multi-stakeholder partnership. To facilitate this proposal, we recommend that CBPR principles be implemented when such partnerships are just forming so that potential misunderstandings may be avoided at a later stage of the work. Training and the practice of the CBPR principles of open communication, trust, and mutual respect for the knowledge, expertise and resources of all partners involved takes time to develop so training on these working partnership principles should be instituted early (Wallerstein & Duran, 2006). Similarly, Maurana & Goldenberg (1996) reported principles they found essential for their academic-community partnership experience in improving the health of residents in Ohio. These principles include leadership, partnership, and empowerment among all participants (Wallerstein & Duran, 2006).

Every community is different and we propose that more can be accomplished in addressing community-based public health issues by utilizing the strengths within that community. Academic-community partnerships represent a part of the "village" it takes to improve community health and we recommend that the time necessary for such relevant collaborations to foster should be built into the academic-community partnership development process. The amount of "time" it takes for such a collaboration to function will vary community by community due to the dynamic nature of the population and the existing public health issues.

A majority of academic-community partnerships reported that they were "somewhat" or "very effective" in addressing public health issues in their community. Examples of their effectiveness included "a greater awareness" of the public health issue in the community. We recommend that implementing a measure of effectiveness be considered by such partnerships that are conducting time- and labor-intensive work. We argue that raising the awareness about a public health issue is often the first step needed to initiate sustainable change and should be viewed as a milestone in the progression and evaluation of the academic-community partnership's work. Certainly a sustained intervention that reduces or eliminates the public health issue of concern would also be considered a great success (for example, the significant decrease in the teenage pregnancy rate as reported by one respondent; and the increase in lead screening rates among children as reported by another respondent), but it is important to acknowledge and evaluate those accomplishments that may not appear major at first glance.

It is also important to note that these varied academic-community partnerships reported their work as being "somewhat" or "very effective" in the face of barriers also experienced by the private and not-for-profit sectors, i.e., a lack of financial resources, a lack of time for the project, and a lack of building infrastructure (e.g., memorandum of understanding, standard processes, communication methods). There are no easy solutions to these barriers that are far too common. However, we propose that a consistent pooling of resources, in terms of building on the strengths and talents of multiple stakeholders could be productive. Maurana and Goldenberg (1996) report that based on their academic-community partnership experience, they worked to diversify their funding sources and have complemented their academic institution's resources with the community's resources so they are a united team applying for limited grant dollars.

We propose that academic-community partnerships hold great potential for expanding the breadth of public health issues that are able to be addressed at the local level. Public health is a very broad and diverse discipline and such collaborations could focus on matters related to land use management, workforce development, and community revitalization initiatives. However, as one academic respondent mentioned, academic institutions often do not acknowledge this community-based work because of the time needed to produce a peer-reviewed result that may not coincide with the academician's schedule for academic promotion. Seeing the potential for such academic-community partnerships to improve the quality of life for populations, we recommend that academic institutions need to reconsider the value placed on such work and adjust the promotion schedule for those faculty engaged in academic-community partnerships. Maurana and Goldenberg (1996) report, in their experience, "…a restructured reward system that values professional service and applied research" outside of their academic institution was developed. As the outcomes of such unique and productive partnerships become more visible, we anticipate more academic institutions will adopt a similar approach.

Academic-community partnerships reported several means by which to assess the effectiveness of the partnership itself. Most partners reported several basic measures including the number

of attendees at meetings, contributions of partners while at these meetings, extent of information disseminated, etc. We encourage academic-community partnerships to engage in a regular assessment of their partnership in addition to the evaluation that occurs with the established public health intervention the partnership has implemented. We propose that regular evaluation of the partnership itself will allow for adjustments in the operating principles, if necessary, and should contribute to the partnership's sustainability. The partners should develop an assessment tool for their partnership that is right for them – a "one size fits all" evaluation tool would not be appropriate but general components may include an assessment of the knowledge and utilization of CBPR principles by all involved partners.

Although the findings from this exploratory analysis provide valuable insight into the characterization of academic-community partnerships working on public health issues, several limitations to this work should be noted. The sampling bias associated with a non-probability sampling technique limits the generalizability of the findings from this study to other academic-community partnerships. Missing data occurred randomly across the surveys. In addition, the results were limited by the cross-sectional study design and compliance to the authenticity of self-reported information. Similar to other studies, our work, in many instances, was challenged by collecting data that pertained to the perceptions of individual partners. Despite these limitations, our findings have been appropriately qualified and we propose they provide valuable insight into the development, functioning, and effectiveness of academic-community partnerships that address public health issues.

As academic and community collaborations become increasingly common for addressing challenging public health concerns, we propose that evaluating the effectiveness of academic-community partnerships should include an evaluation of the partnership itself. We argue that the process of partnering is just as important as the public health intervention's outcome. This partnership evaluation should move beyond the ivory walls and also encompass the community's benchmarks for success. Furthermore, our findings provide some evidence that using CBPR principles in the partnership may be beneficial, and the results emphasize the need for funding, communication, and flexibility when conducting complex yet rewarding work. Future research should include the empirical evaluation of whether the collaborations themselves are actually having the desired effect on the public health concerns they were developed to help alleviate.

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About the Authors

Rosemary M. Caron is an associate professor in the Department of Health Management and Policy in the College of Health and Human Services at the University of New Hampshire. Jessica D. Ulrich-Schad is a doctoral candidate in the Department of Sociology in the College of Liberal Arts at the University of New Hampshire. Catherine Lafferty is an honors graduate of the Department of Health Management and Policy in the College of Health and Human Services at the University of New Hampshire.

Appendix A. Academic-Community Partnership Survey: Academic Partners

School/Program of Public Health Information

1) To your knowledge, is, or has, your academic institution worked with community partners to address public health issues in your local community?

-If yes, please continue survey.

-If no, please explain._____? (Please discontinue survey.)

2) Are you knowledgeable enough about an academic-community partnership your academic institution has participated in, or is participating in? (We realize that your institution may be involved in numerous partnerships for which you are not involved.)

-If yes, please continue.

-If no, we kindly request that you submit the survey to the appropriate colleague at your institution who could complete the survey. Thank you.

3) Please name the school/program of public health for which you are associated:

4) What is your current role/position at this academic institution?

Public Health Issue(s) Addressed

5) Of the primary academic-community partnership for which you are/were involved, what is the main public health issue the partnership sought to address in the community? Please select one.

a. Childhood lead poisoning
b. Asthma
c. Teenage pregnancy
d. Drug use
e. Childhood obesity
f. Safe neighborhoods/violence prevention
g. Walkable community
h. Chronic disease (e.g., heart disease, cancer, diabetes)
i. HIV/AIDS
j. Sexually transmitted diseases (not including HIV/AIDS)
k. Refugee resettlement
l. Oral health
m. Mental health
n. Unemployment
o. Social capital/connectedness
p. Emergency preparedness
q. Access to healthy food choices
r. Access to health care
s. Healthy indoor school environment
t. Industry that is contaminating the environment
u. Other:

6) Please identify the other public health issues that academic-community partnerships at your institution have sought to address? Please check all that apply.

a. Childhood lead poisoning
b. Asthma
c. Teenage pregnancy
d. Drug use
e. Childhood obesity
f. Safe neighborhoods/violence prevention
g. Walkable community
h. Chronic disease (e.g., heart disease, cancer, diabetes)
i. HIV/AIDS
j. Sexually transmitted diseases (not including HIV/AIDS)
k. Refugee resettlement
l. Oral health
m. Mental health
n. Unemployment
o. Social capital/connectedness
p. Emergency preparedness
q. Access to healthy food choices
r. Access to health care
s. Healthy indoor school environment
t. Industry that is contaminating the environment
u. Other:

Community Partner Information

7) Please list the kind of community-based partners that you are/were working with on the main public health issue identified in Question 5. Please check all that apply.

a. Community coalition — Please name:
b. Community advisory board — Please name:
c. Council — Please name:
d. Citizen activist group — Please name:
e. Non-profit organization — Please name:
f. Local health department — Please name:
g. County health department — Please name:
h. Regional health department — Please name:
i. State health department — Please name:
j. Other municipal department — Please name:
k. Other — Please describe and name:

Nature/Characteristics of the Academic-Community Partnership

8) What has been/is the role of your school/program of public health in this partnership? Please check all that apply.

a. Convener of the academic-community partnership
b. Invited member by the community partner
c. Other (please describe):

9) Does your academic-community partnership operate by the principles of Community-Based Participatory Research (CBPR)? Please select one.

a. Yes,
b. No
c. I don't know what CBPR principles are
d. Other (please describe):

10) What activities did/does your academic-community partnership engage in to address this public health issue? Please check all that apply.

a. Surveys
b. Focus groups
c. Interviews with key informants
d. Regular school meetings
e. Newsletters
f. Media outlets (e.g., local access cable television)
g. Work with the legislature
h. Work with healthcare providers
i. Other (please describe):

11) If conflicts between partners arose, how were they resolved? Please check all that apply.

a. An independent mediator
b. Consistent attempts by both partners via face-to-face communication
c. Dissolution of the partnership
d. Other (please describe):

12) How is your partnership working to obtain the resources needed to reach its goals? Please check all that apply.

a. Writing grants to local funding agencies
b. Writing grants to state funding agencies
c. Writing grants to federal agencies
d. Writing grants to private funding foundations/organizations
e. Fundraising initiatives
f. Other (please describe):

Effectiveness of Partnership

Strengths/Benefits

13) What have been some of the positive outcomes of your academic-community partnership on public health issues that impact the community? Please check all that apply.

a. Greater community awareness of the public health issue
b. Reduction of exposure
c. Elimination of the public health issue
d. Funding to continue the work to address the issue
e. None
f. Don't know
g. Other (please describe):

14) Overall, how beneficial do you think your academic-community partnership is/was perceived by the community in which you worked? Please select one.

a. Very beneficial
b. Somewhat beneficial

c. Not beneficial
d. Don't know
e. Other (please describe):

Weaknesses/Challenges

15) What have been some of the barriers/challenges in establishing community relationships? Please check all that apply.
a. Building infrastructure (e.g., Memorandum of Understanding, communication methods, standard processes)
b. Lack of community engagement
c. Implementing Community-Based Participatory Research (CBPR) principles
d. Lack of financial resources
e. Lack of time for project
f. Lack of experienced personnel
g. Other (please describe):

Goal Achievement

16) How effective has your academic-community partnership been (to date) at addressing the main public health issue you identified in Question 5 in your community? Please select one.
a. Very effective
b. Somewhat effective
c. Neither effective nor ineffective
d. Somewhat ineffective
e. Very ineffective
f. Don't know
g. Other (please describe):

17) Please describe how you judge/evaluate the effectiveness of your academic-community partnership in addressing the identified public health issue?

18) Based on the measure(s) of effectiveness identified in Question 17, was your academic-community partnership successful in addressing the public health issue in the community? Please select one.
a. Yes
b. No
c. Too early to tell
d. Other (please describe):

19) Has your academic-community partnership published (or is in the process of writing/submitting) any of the partnership results in a peer reviewed journal? Please select one.
a. Yes (If yes, please cite the peer-reviewed journal:)
b. No
c. Don't know

20) Has your academic-community partnership published (or is in the process of writing/submitting) any of the partnership results anywhere besides a peer reviewed journal? Please select one.
a. Yes (If yes, please describe).
b. No
c. Don't know

Future Academic-Community Partnerships

21) Please describe the lessons your academic institution learned (to date) from this academic-community partnership?

22) What, if anything, do you think your academic-community partnership could have done/could do differently to make this partnership more effective? Please check all that apply.
a. Provide more human resources
b. Spend more time on project
c. Provide more financial resources
d. Nothing
e. Other (please describe):

23) How likely is it that your academic institution will use an academic-community partnership in the future to address public health issues in your community? Please select one.
a. Very likely
b. Somewhat likely
c. Neither likely nor unlikely
d. Somewhat unlikely
e. Very unlikely
f. Don't know
g. Other (please describe):

24) Overall, would you say that your academic-community partnership: Please select one.
a. Completely reached its objectives
b. Met some of its objectives
c. Didn't meet any of its objectives
d. Still in the process of trying to reach objectives
e. Don't know
f. Other (please describe):

25) Is there anything else that you would like to add about the effectiveness of the academic-community partnership for which you have been involved? Please explain.

Appendix B. Academic-Community Partnership Survey: Community Partners

Community Organization Information

1) To your knowledge, is, or has, your community organization worked with academic partners to address public health issues in your local community?
-If yes, please continue survey.
-If no, please explain._____? (Please discontinue survey.)

2) Are you knowledgeable enough about an academic-community partnership your community organization has participated in, or is participating in? (We realize that your organization may be involved in numerous partnerships for which you are not involved.)
-If yes, please continue.
-If no, we kindly request that you submit the survey to the appropriate colleague at your organization who could complete the survey. Thank you.

3) Please name the community organization for which you are associated:

4) What is your current role/position in this community organization?

Public Health Issue(s) Addressed

5) Of the primary academic-community partnership for which you are/were involved, what is the main public health issue the partnership sought to address in the community? Please select one.
a. Childhood lead poisoning
b. Asthma
c. Teenage pregnancy
d. Drug use
e. Childhood obesity
f. Safe neighborhoods/violence prevention
g. Walkable community
h. Chronic disease (e.g., heart disease, cancer, diabetes)
i. HIV/AIDS
j. Sexually transmitted diseases (not including HIV/AIDS)
k. Refugee resettlement
l. Oral health
m. Mental health
n. Unemployment
o. Social capital/connectedness
p. Emergency preparedness
q. Access to healthy food choices
r. Access to health care
s. Healthy indoor school environment
t. Industry that is contaminating the environment
u. Other:

6) Please identify the other public health issues that academic-community partnerships at your organization have sought to address? Please check all that apply.
a. Childhood lead poisoning
b. Asthma
c. Teenage pregnancy
d. Drug use
e. Childhood obesity
f. Safe neighborhoods/violence prevention

g. Walkable community
h. Chronic disease (e.g., heart disease, cancer, diabetes)
i. HIV/AIDS
j. Sexually transmitted diseases (not including HIV/AIDS)
k. Refugee resettlement
l. Oral health
m. Mental health
n. Unemployment
o. Social capital/connectedness
p. Emergency preparedness
q. Access to healthy food choices
r. Access to health care
s. Healthy indoor school environment
t. Industry that is contaminating the environment
u. Other:

Community Partner Information

7) Please list the kind of academic partners that you are/were working with on the main public health issue identified in Question 5. Please check all that apply.

a. School of public health Please name:
a. Program of public health Please name:
b. Department of Community Health Please name:
c. Department of Environmental Health Please name:
d. Department of Nursing Please name:
e. Department of Sociology Please name:
f. Department of Social Work Please name:
g. Department of Maternal and Child Health Please name:
h. Business School Please name:
i. Law School Please name:
j. Other: Please describe and name:

Nature/Characteristics of the Academic-Community Partnership

8) What has been/is the role of your community organization in this partnership? Please check all that apply.

a. Convener of the academic-community partnership
b. Invited member by the academic partner
c. Other (please describe):

9) Does your academic-community partnership operate by the principles of Community-Based Participatory Research (CBPR)? Please select one.

a. Yes,
b. No
c. I don't know what CBPR principles are
d. Other (please describe):

10) What activities did/does your academic-community partnership engage in to address this public health issue? Please check all that apply.

a. Surveys
b. Focus groups
c. Interviews with key informants
d. Regular school meetings
e. Newsletters
f. Media outlets (e.g., local access cable television)
g. Work with the legislature
h. Work with healthcare providers
i. Other (please describe):

11) If conflicts between partners arose, how were they resolved? Please check all that apply.

a. An independent mediator
b. Consistent attempts by both partners via face-to-face communication
c. Dissolution of the partnership
d. Other (please describe):

12) How is your partnership working to obtain the resources needed to reach its goals? Please check all that apply.

a. Writing grants to local funding agencies
b. Writing grants to state funding agencies
c. Writing grants to federal agencies
d. Writing grants to private funding foundations/organizations
e. Fundraising initiatives
f. Other (please describe):

Effectiveness of Partnership

Strengths/Benefits

13) What have been some of the positive outcomes of your academic-community partnership on public health issues that impact the community? Please check all that apply.

a. Greater community awareness of the public health issue
b. Reduction of exposure
c. Elimination of the public health issue
d. Funding to continue the work to address the issue
e. None
f. Don't know
g. Other (please describe):

14) Overall, how beneficial do you think your academic-community partnership is/was perceived by the community in which you worked? Please select one.

a. Very beneficial
b. Somewhat beneficial
c. Not beneficial
d. Don't know
e. Other (please describe):

Weaknesses/Challenges

15) What have been some of the barriers/challenges in establishing relationships with academic partners? Please check all that apply.

a. Building infrastructure (e.g., Memorandum of Understanding, communication methods, standard processes)
b. Lack of community engagement
c. Implementing Community-Based Participatory Research (CBPR) principles
d. Lack of financial resources
e. Lack of time for project
f. Lack of experienced personnel
g. Other (please describe):

Goal Achievement

16) How effective has your academic-community partnership been, to date, at addressing the main public health issue you identified in Question 5 in your community? Please select one.

a. Very effective
b. Somewhat effective
c. Neither effective nor ineffective
d. Somewhat ineffective
e. Very ineffective
f. Don't know
g. Other (please describe):

17) Please describe how you judge/evaluate the effectiveness of your academic-community partnership in addressing the identified public health issue?

18) Based on the measure(s) of effectiveness identified in Question 17, was your academic-community partnership successful in addressing the public health issue in the community? Please select one.

a. Yes
b. No
c. Too early to tell
d. Other (please describe):

19) Has your academic-community partnership published (or is in the process of writing/submitting) any of the partnership results in a peer reviewed journal? Please select one.

a. Yes (If yes, please cite the peer-reviewed journal:)
b. No
c. Don't know

20) Has your academic-community partnership published (or is in the process of writing/submitting) any of the partnership results anywhere besides a peer reviewed journal? Please select one.

a. Yes (If yes, please describe).
b. No
c. Don't know

Future Academic-Community Partnerships

21) Please describe the lessons your community organization learned (to date) from this academic-community partnership?

22) What, if anything, do you think your academic-community partnership could have done/could do differently to make this

partnership more effective? Please check all that apply.

a. Provide more human resources
b. Spend more time on project
c. Provide more financial resources
d. Nothing
e. Other (please describe):

23) How likely is it that your community organization will use an academic-community partnership in the future to address public health issues in your community? Please select one.

a. Very likely
b. Somewhat likely
c. Neither likely nor unlikely
d. Somewhat unlikely
e. Very unlikely
f. Don't know
g. Other (please describe):

24) Overall, would you say that your academic-community partnership: Please select one.

a. Completely reached its objectives
b. Met some of its objectives
c. Didn't meet any of its objectives
d. Still in the process of trying to reach objectives
e. Don't know
f. Other (please describe):

25) Is there anything else that you would like to add about the effectiveness of the academic-community partnership for which you have been involved? Please explain.