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Community Perspectives on Factors That Influence Collaboration in Public Health Research

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Abstract

Community collaboration in research may lead to better methods, results, and dissemination of interventions. Little systematic research has examined specific factors that influence community-based organizations (CBOs) to collaborate in public health research. There is an urgent need to advance knowledge on this topic so that together, researchers and CBOs can minimize barriers to collaboration. This study advances a CBO-focused characterization of collaboration in HIV-prevention research. By focusing on the perspectives of 20 key informants in 10 HIV-prevention CBOs, qualitative data revealed factors that influenced their collaborations in four domains: (a) Researchers' Characteristics (expertise, availability), (b) Collaborative Research Characteristics (ought to improve services and CBO infrastructure); (c) Community Partner–Researcher Relationships (resolving social and professional issues); and (d) Barriers to HIV-Prevention Research Collaboration (cultural and social disconnect between CBO and academia). To reduce barriers, researchers ought to enhance motivators that facilitate collaboration. To use the advantages of community-based research, prevention scientists and policy makers ought to embrace CBOs' characterization of what makes health research genuinely collaborative.

Keywords

collaboration; public health research; HIV prevention; community-based organizations

Researchers and policy makers often ask community-based organizations (CBOs) to engage in public health research through “collaboration,” which is generally defined as a social process in which researchers share their research roles and responsibilities with CBO personnel. Such roles and responsibilities include recruiting participants, defining methods and procedures, and disseminating findings. CBOs are major resources in at-risk communities, making them ideal sites for collaborative research on myriad health issues. However, professional disconnects between researchers and practitioners may inhibit the development of CBO–researcher partnerships and, thus, the use of effective interventions by CBOs. Research–practice disconnects may include researchers' unrealistic demands on CBOs' time and CBOs' mistrust of researchers on issues of funding, confidentiality, and ownership of the research projects. CBOs may also perceive researchers as unavailable to community partners and/or out of touch with the health needs of their communities (Biafora et al., 1993; Dalton, 1989; Gustafson, McNamara, & Jensen, 1992; Kegeles, Rebchook, & Tebbetts, 2005; Stevenson & White, 1994; Thomas & Quinn, 1991; Wyatt, 1997). These challenges may ultimately determine whether CBOs will engage in health research.

To address these issues, prevention scientists have proposed paradigms for community involvement in research that may lead to better methods, results, and dissemination of disease-prevention interventions. Prevention scientists agree that collaborative research can be influenced by myriad facilitating factors that may help reduce barriers that have discouraged CBOs from engaging in research (Davies & Kelly, 1993; Gillies, 1998; Israel, Schulz, Parker, & Becker, 1998; Minkler & Wallerstein, 2003; Remington, Axelrod, Bingham, Boyle, & Breslow, 1988; Roe, Guinness, & Rafferty, 1997). However, little research has examined, from the perspective of CBOs, the factors that make public health research genuinely collaborative. Grounded in data from CBO key informants with experience in HIV-prevention research, the current study will systematize several factors in a cohesive set of domains of reference. It is projected that the findings presented here will be applicable to collaboration in research on other types of diseases and conditions.

Background

Concerns about bridging research and practice and the paucity of information on factors that influence HIV-prevention collaborative research have led the Community Collaborative Core (CCC) of the HIV Center for Clinical and Behavioral Studies (HIV Center) to engage in community-focused research aimed to identify issues that may hinder and/or facilitate CBO–researcher partnerships. The CCC has a long history of community-focused research stemming from its relationships with CBOs that provide HIV-related services. Based in New York City, the CCC has benefited from relationships with dozens of CBOs that have served as sites for HIV-prevention research. The CCC represents an intersection of research, practice, and policy, comprising a group of senior researchers and postdoctoral fellows, policy makers, and community representatives. The CCC offers formal and informal consultations to CBOs and receives input from CBOs and research participants. Over time, the CCC has developed an exchange of scientific and lay knowledge that has enhanced its ability to engage in research that appeals to service providers.

As part of its mission, the CCC has created opportunities for dialogues among researchers, practitioners, and policy makers. One of these efforts, the “Working Together” Conference, focused on the examination of contemporary issues in HIV research. Half of the 113 people who attended the conference were CBO representatives. In small discussion groups, organized by area of research interest, CBO representatives identified research priorities, including the systematization of motivators or facilitators and barriers to their collaboration with researchers and the dissemination of this knowledge to other CBOs. In response to this recommendation, the current study aimed to identify, from the perspective of CBOs, factors that influence collaborative research positively and barriers that may hinder collaboration.

Twenty informants from 10 CBOs each provided in-depth interviews on two different HIV research projects—the “most successful” and “least successful” collaborations in which their agencies had participated. This approach reflected principles of community-based participatory research (Israel et al., 1998; Minkler & Wallerstein, 2003), in that a community of CBO representatives urged researchers to systematize factors that influenced the course of successful collaborations. CBO representatives lent credibility and relevance to this project by committing to oversee the methods and procedures and to use the findings to guide their own policies on involvement in HIV-prevention research. Factors identified will equip CBOs and researchers to reduce barriers while maximizing motivators that facilitate CBO involvement in research.

Factors That Influence Collaboration in Research

Factors that influence collaboration in research may include characteristics of researchers and their institutions, of the type of research CBOs and researchers can do together, and of the

professional relationships they may develop (Dworkin, Pinto, Hunter, Rapkin, & Remien, 2008; McKleroy et al., 2006).

Researchers' characteristics (e.g., degrees, position, experiences) and how collaborators experience one another's personalities and manners—including availability, understanding, and trust—may ultimately influence collaboration. Demographic characteristics of partners, along with researchers' institutional affiliations, may also influence CBO–research collaboration (Abramson & Misrahi, 1996; Lee & Williams, 1994; McKay, Pinto, Bannon, & Guillermo-Ramos, 2007; National Institute of Mental Health, 1997; Pinto, McKay, & Escobar, 2008; Wingood et al., 2004). Characteristics of social and professional relationships between CBOs and researchers may influence collaborative research, and prior experience in research may influence future collaborations. Having professional aspirations met, and satisfaction with partners' performances, may also influence how long collaborative partnerships last (Bronstein, 1999; Gillies, 1998; Pinto & McKay, 2006a, 2006b; Roe, Guinness, & Rafferty, 1997).

Adherence to a definition of collaborative research that is meaningful to both CBOs and researchers influences collaboration; that is, research that caters to at-risk populations and that improves consumers' lives increases providers' interest to collaborate. CBOs engage in research to learn more about disease prevention, to make social contributions, to develop skills, and to improve the services they provide (Griffin & Floyd, 2006; Grinstead, Zack, & Faigles, 1999; Harper & Carver, 1999; Harper & Salina, 2000; Radda, Schensul, Disch, Levy, & Reyes, 2003; Vander Stoep, Williams, Jones, Green, & Trupin, 1999; Ziff et al., 2006).

Barriers to collaboration can be conceptualized either as the absence of any or all motivators listed above or as other factors that hinder collaboration. They include social and professional disconnects between community and academia, CBO negative attitudes toward research, and lack of research experience, time, and/or human resources. Moreover, concerns about distribution of resources in research projects, ownership of the research, and researchers' interpretations of data may also constitute barriers to collaboration (Gomez & Goldstein, 1996; Kegeles et al., 2005; McKay, Pinto, et al., 2007; Pinto et al., 2008).

Theoretical Framework for Collaboration in Research

This project was guided by an integrated conceptual framework. Balance theory of coordination establishes a theoretical link between researchers in research institutions and smaller CBOs by proposing that collaboration between researchers and CBOs can best occur when the two groups find a fit between scientific and lay knowledge. The complementary nature of these knowledge sets generates research that is more meaningful and more useful to communities and to researchers (Litwak, Meyer, & Hollister, 1977; Litwak, Shiroy, Zimmerman, & Bernstein, 1970). A good fit between scientific and lay knowledge have been defined as partnership synergy, the distinguishing element that could give CBOs and researchers an advantage over the work they could do apart (Lasker, Weiss, & Miller, 2001). Strong social and professional relationships between researchers and CBOs and a fair distribution of resources may promote partnership synergy. From this perspective, in genuine collaborations, researchers and CBOs would strike a balance of roles and responsibilities by combining the strengths of each party, by making the most of CBOs' skills and knowledge, and by integrating CBOs' missions and priorities into the research.

METHOD

All procedures and methods for this study were developed in collaboration with the CCC's researchers and community representatives. The author oversaw all procedures, facilitated CCC discussions about the project, recruited and interviewed participants, and in collaboration

managed, analyzed, and disseminated the data. The study was approved by the appropriate institutional review boards. This study's data were meant to generate (exploratory stance) factors that influenced collaboration and barriers that may have hindered them.

Recruitment

In line with a participatory philosophy that recognizes mutual creation of knowledge by academics and community collaborators (Christopher, Burhansstipanov, & Gun-McCormick, 2005), 20 representatives from 10 CBOs were recruited as key informants (inclusion criteria below), and four CBO-services providers (providers) were recruited as experts to oversee the study.

Community Providers Panel (CPP)—The CPP comprised four providers (master's levels in social work and nursing) recruited to assist in refining the interview protocol and in coding, analysis, and interpretation of data. Two providers were members of a collaborative research board, and the other two were experienced providers who offered HIV-prevention services in diverse communities.

CBOs—To identify similar CBOs, CBO representatives and policy makers recommended CBOs that provided HIV-related services with funds from the local government. The final sample thus included 10 of 50 CBOs funded by the New York City Department of Health and Mental Hygiene (NYCDHMH). CBOs were selected based on the following criteria: (a) at least three instances of collaboration in HIV research, (b) availability of the executive director (ED) and another informant on the CBO staff, and (c) both the ED and the other informant had to have worked on at least one stage of the same research projects. *Experience in collaboration* refers to the frequency and extent of each informant's work in HIV research.

CBO Informants—Once a CBO was selected, its ED was invited to participate, and that ED was asked to identify one other employee to be interviewed. The second informant was selected only if he or she had worked on the same projects as the ED. The project's budget allowed for 20 interviews. Although data saturation began to occur after 16 informants from 8 CBOs had been interviewed, in order to confirm saturation, another 4 informants from 2 other CBOs were interviewed. The final sample included 20 informants from the first 10 CBOs that met inclusion criteria and whose ED agreed to participate. CBOs that agreed to participate received \$200 as compensation for the use of CBO space for the interviews.

Interview Procedures

Key informants participated in face-to-face semistructured interviews. They lasted from 45 to 75 minutes and were audiotaped for transcription per informants' consent. Each ED chose, from among all research projects in which they had been engaged at their current CBO, one project that they considered most collaborative and another that they considered least collaborative. They provided data, first on the most collaborative project and then on the other. The other informant in each CBO was asked to describe his or her own experiences with those same projects. Before the interview began, informants were given a definition of *research collaboration* developed by the study's collaborators—social processes in which researchers share roles and responsibilities with CBO personnel to accomplish tasks such as recruitment, data collection, interviews, supervising staff, data analysis, and writing and presenting results.

Interview Protocol

Several standards for good measurement were used to ensure validity of the interview protocol (Neuendorf, 2002). In consultations with the CCC, the CPP developed the questions and prompts. To ensure the fidelity of the protocol, an independent researcher and one member of

the CPP reviewed the first two interview tapes plus three randomly selected tapes. Based on their recommendations, the interviews were made shorter, and demographic questions were moved to the end of the interview.

The interviews started with the question, “Based on the definition of collaboration given to you, could you please describe your [most/least] successful collaboration in an HIV prevention research project?” To tap into different domains of influence in research, prompts were used to obtain information about (a) personal characteristics of ideal researchers and of their institutions, (b) values defining collaborative HIV-prevention research, (c) how researchers and community partners build relationships, and (d) barriers to successful collaboration in HIV-prevention research. Participants were asked to explore collaboration in several phases of research, including how collaborators established relationships, defined specific aims, specified methods, determined measures, analyzed and interpreted data, and disseminated results. To specify barriers and facilitating factors that influence collaboration, informants gave examples and explained what differentiated low-collaboration from high-collaboration projects.

Analytic Strategy

Interviewing two CBO staff, relying on the CPP expertise, and using an iterative process for analysis and interpretation of findings, all increased confidence in the results. To ensure mutual creation of knowledge (Creswell, 2003), all four CPP providers worked on the analysis and interpretation of the data. To enhance interpretive clarity, providers were trained in qualitative methods (Coreil, 1995), including basic knowledge about research, methods, and techniques for qualitative data analysis. All procedures in the analysis followed techniques well documented in the literature below (Neuendorf, 2002; Ryan & Bernard, 2000).

Data Sampling and Establishing Themes—Given the wide variation in research experiences among informants, one researcher and two CPP members read all interviews immediately after they had been transcribed and independently identified basic units of analysis—grammatical segments and/or chunks of text. After reading the same pair of transcripts, coders held discussions about main themes they identified and agreed on the basic units of analysis. Each interview was read line by line, examining text about possible motivators or facilitators and barriers to research collaboration. Because open-ended questions prompted all informants to describe motivators or facilitators and barriers, coders found these variables in all transcripts, and they independently identified them.

Codebook—By consensus, coders agreed that the main constructs that informants described as influences (motivators and barriers) to collaboration had been identified after reading the first 10 interviews. However, while analyzing the next two transcripts, two new codes surfaced and two others were collapsed into one. These codes were redefined and added to the codebook. Inter-coder reliability was 100%. After completing the codebook, the coders reanalyzed all transcripts to adhere to the refined codebook. The codebook, summarized in the appendix, contains definitions of factors and barriers in four distinct domains. Coders used these to mark the text of all transcripts.

Marking and Selecting Text—After 16 transcripts had been analyzed, the coders suspected that saturation of the data might have occurred; that is, no other categories or themes were emerging from the data, and all data fit into the codes and subcodes that the CPP had already devised (Charmaz, 2000). This was confirmed by fully analyzing the transcripts of another four interviews. Coders agreed to mark only text that closely matched the definitions in the codebook. Once they came to an agreement as to which passages in the transcripts best represented the constructs in the codebook, a grid containing these passages was created. Only

passages chosen by all three coders were included. To add rigor to the interpretation of findings, a CPP member independently selected, based on clarity of expression and specificity, among the passages that best characterized each factor identified by the coders. These passages (“quotes”) were then reviewed by two coders and revised for grammatical clarity.

RESULTS

Characterizing the Sample of CBOs

The 10 CBOs in the sample represented five agencies that mainly provided medical HIV-related services (e.g., HIV testing, medical care) and five that provided mainly social services (e.g., counseling, HIV-prevention workshops). The number of staff per CBO ranged from 37 to 250 individuals ($M = 124$; $SD = 74$). The number of volunteers per CBO ranged from 5 to 1,200 ($M = 201$; $SD = 408$). Seven CBOs involved volunteers in research projects, 6 involved board members, and 9 involved consumers. The number of research projects with which CBOs had been involved ranged from 3 to 20 ($M = 7$; $SD = 2$). Researchers with whom CBOs collaborated were academic faculty; medical doctors or doctors of philosophy mainly in public health, social work, and psychology.

Characterizing Key Informants

Twenty informants—the ED and one other employee of each of the 10 CBOs selected—were interviewed. Ten EDs and 10 other informants (program directors, associate directors, and project coordinators) completed the interview. The range of experiences within these positions allowed for diverse points of view to enrich and validate the data. Six informants were male and 14 female; ages ranged from 26 to 66 ($M = 49$; $SD = 10$); 11 identified as White, 4 as Hispanic/Latino, 3 as African American, and 2 as Asian or Pacific Islander. One informant had completed high school, 4 had completed a 4-year college program, 12 held master’s degrees, 2 held degrees in law, and 1 held a degree in medicine. Informants had been employed from 2 to 25 years in their positions ($M = 10$; $SD = 6$).

Influences in HIV-Prevention Research Collaboration

Each informant described in detail two research projects in which they had been involved and the researchers with whom they collaborated. Their descriptions revealed four domains of reference and several factors that characterized what they perceived as truly collaborative projects. Informants also identified barriers that hindered their ability to collaborate. Table 1 shows, in descending order, the numbers of informants who provided data closely matching the domains in the codebook (n_1). Table 1 also shows the percentage of informants who identified each of the factors (n_2). Below, domains of reference and their respective factors are presented. Illustrative quotes characterizing collaborative HIV-prevention research and the barriers that might make it less collaborative accompany each variable. Individual informants were not quoted more than three times.

Researchers’ Personal Characteristics ($n_1 = 17$)

In describing collaborations, informants characterized “collaborative researchers” as available experts with good social skills.

Expertise ($n_2 = 14$)—Respondents reported that the collaboration was most successful when the researcher was an expert in her or his field and able to understand the community served by the CBO.

He [the researcher] made sure that we were doing it in a rigorous way, that [the project] reflected proper methodology.

I think he understood our clients pretty well. He had a breadth of experience of having worked with a lot of different CBOs ... he understood the reality of what goes on with a CBO, what's possible given the funding that we have, and what's not possible.

Availability ($n_2 = 11$)—Informants discussed how important it was for the researcher to be available to CBO staff. Availability was perceived as facilitating the collaboration.

In the beginning, the principal investigator ... was available only once in six months. But the principal investigator was [replaced by] a local researcher, and he was always here, available once or twice a month.

She was very available to us by phone. We had five different phone numbers for her. And she was very willing to share the information, to share the grant, to share whatever it is that she had written up, so we really knew why we were doing this with her.

Social Skills ($n_2 = 7$)—Informants described researchers with whom they had collaborative experiences as likeable and as having good social skills and a sincere concern for consumers of research and for CBO staff.

From the very beginning, he has been very clear that his agenda for this project was for the agency to succeed. He has terrific people skills. He's very good with the staff, the folks liked him very much, and I would say a lot of it has to do with his personality.

She was very empathetic to the women in the program. Even before she started, the minute she got to meet them, it became really a passion, so she really cared about them. And that made her care about the elements of the program ... so it was more than just data collection.

Characteristics of Researchers' Institutions ($n_1 = 8$)

In describing research collaborations, informants also characterized the ideal type of institutions with which their collaborators ought to be affiliated. These were described in terms of reputation and scientific resources, which were important motivators to collaborative research.

Having the collaboration with [University X] gave us prestige, going back to maybe how the institution influenced it. I think having that collaboration for us was helpful. We could report to our funders, "Oh, we have this collaboration with [Dr. Y], and he's at [University X]."

[University Z] is a large academic backup. It helped us to shape our project much more research sounding. Without that backup, usually a community organization doesn't have a strong infrastructure to create anything that withstands research's rigor.

Collaborative Research Characteristics ($n_1 = 15$)

The Research Ought to Improve Services and CBO Infrastructure ($n_2 = 15$)—Respondents described as collaborative those projects that improved services and CBO infrastructure.

The service infrastructure was developed along the way. So we have a good program with the infrastructure set up for services. Ideally it needs to be institutionalized, meaning research findings somehow extracted to make it as a protocol, or recommendations, or some kind of reflection into the structure of the agency.

We're trying to use research in advocacy, because there is a need for a bridge. If it stays in a journal, it never makes it into the field. It doesn't make it into policy making.

And I think an organization like ours, that does service and advocacy, can have a translating role.

When the clinical aspect of the study was supposed to come to an end and the researchers were going to do the follow-up study, those of us who were the clinical team formed a not-for-profit corporation so that we could raise money to keep the program.

The Research Ought to Have a Purpose Defined by All Partners ($n_2 = 13$)—One element used to characterize a collaborative experience was the existence of an agreed-upon issue (e.g., health condition) that was relevant to both the researcher and the communities served by the CBOs.

It's important to be able to articulate the issue and to insure that the issue described by the community is the one that's being investigated. And it's not some other issue.

I think that what worked was the attitude that we're making something happen that matters together, so it was very much a partnership where each of us brought something to it.

When [the researcher] came to us, she was really looking for a place to do action-oriented research, so it was a good fit. Our perspective on doing research grew out of a real sense of commitment and obligation that we're doing good work.

The Research Ought to Involve Research Participants and Ought to Enhance Their Lives ($n_2 = 13$)—Respondents said that in collaborative research, researchers use input from consumers to develop opportunities for enhancing their lives through training, education, and even employment.

One of the lessons has been the necessity for the input of the target population in developing materials that we were going to use. It was really helpful to make sure that the youth themselves were highly involved in creating the survey, creating the marketing materials, all those types of things. It made them feel more involved in this whole process.

As we started to get people graduated from the program, one or two of them became interviewers.... We might want to participate in a research because it provides us with giving opportunities for employment, or to make some money too, for some of our people. We just want to provide clients with a valuable experience. It's something that could lead to a career.

Two of the young women were valedictorians in their high schools, and these are kids that come from the juvenile court. When they became part of this group there was a total change in their attitude: more assertive, more empowerment as a result of the collaboration.

The Research Ought to Involve CBO Staff ($n_2 = 12$)—Collaborative research was identified as that in which researchers involve CBO staff in several phases of research.

We included the receptionist, advisory council, peers, staff, managers, coordinators, directors, senior team, and we got together and said, "Listen, this is what we need to do."

Our input has always been highly valued, and it's always been important that [staff] were very involved with development of the evaluation tools, development of the program design, and of the curriculum that was going to be used throughout the project.

[The researcher] presented the project. She worked with us to figure out how we were going to go about doing it. She listened and engaged the staff. She worked with our clients. She gathered her data. She came back and presented to us.

The Research Ought to Increase the Knowledge Base of CBO Staff ($n_2 = 12$)—

Informants said that the involvement of CBO staff in research increased staff knowledge base. They noted that collaborative research creates avenues for staff professional development and for closing the knowledge gap between researchers and CBOs.

Research can have practical application, which was very important to us, that we learned as much as the researchers did, and it was a good way of focusing on what we were doing, and trying to come up with a best practice to better meet the needs of our consumers.

I want my staff to learn from the researcher. I want them to be comfortable in the whole process. So we do include the staff.

We had a team approach, where staff were trained as interviewers. And we interviewed fifty clients, they wrote up the results, a lot of back and forth about the write-up, and making sure it was nuanced correctly.

Community Partner–Researcher Relationship ($n_1 = 13$)

Getting to Know Each Other ($n_2 = 12$)—Informants described how collaborative projects were started and reported that in half of the cases, they had been approached by a researcher. Regardless of who initiated the project, informants contended that professional and social relationships between CBOs and researchers must develop. Relationship building, in which the researcher got to know the CBO meaningfully, was identified as an important step toward true collaboration.

We were basically building capacity in CBOs. [The researcher] came in and learned the agency. And he started by getting to know us and talking to people and getting to know the culture of the place.

That's also probably the project in which we had most consistent interaction with a researcher. Because the experience has been one where we've communicated so frequently and we've been involved with one another, that's probably why it's been the most successful.

The researchers understood what we were trying to do, and responded equally in providing suggestions. So there was a good working relationship between the two parties.

Resolving Social and Professional Tensions ($n_2 = 8$)—Relationship building was described by all informants as a process in which social and professional differences (e.g., in level of education or research experience) between researchers and CBO staff surfaced throughout the projects they described. Finding common ground around these issues led to more collaborative experiences.

What we were doing was creating this forum where the researchers and the CBO could sit down at the table and not yell at each other, but say, "Hey, this is what we need to do. This is what we need. Well, what do you need? How do we make it work?"

There were a lot of group discussions between the researcher's staff and our staff, because even our staff needed assistance in facilitating these groups, because it was emotionally charged. So there was a lot of feedback, there was a lot of support that helped the staff be able to do this and move forward with it.

So the questions or the issues that came up got elevated to a place where we could hear the researchers and understand them. So we worked them out.

Barriers to HIV-Prevention Research Collaboration ($n_1 = 12$)

To contrast what informants perceived as their highly collaborative research experiences, they also described low-collaboration research projects. In so doing, they highlighted issues that if not resolved, could become barriers to meaningful collaboration.

Lack of Experience ($n_2 = 12$)—Informants contended that previous research experience was an important component in the success of collaborative projects, and so they discussed the need for training CBOs in research methods.

Data collection was really difficult because of lack of training and experience in case managers on these lengthy questionnaires. As you learn and do it, it gets a little easier.

We really needed some additional expertise. There were some of us who were familiar with the concept and had done [research] in the past, but we didn't really have the in-house expertise to make this a formal research project.

Disconnect Between CBOs and Academia ($n_2 = 11$)—Informants described researchers as coming from resource-rich institutions, often perceived as being outside the orbit of the CBO. This would cause a disconnection, leading to fear of further marginalization of the population served by the CBO, as well as suspicion about the research project.

There's an unfortunate disconnect between the world of academia and the world of day-to-day practice, and I think that if the collaboration happens and then the community organization is left out of the lessons learned, then that disconnect is just perpetuated.

We were concerned that young gay/bisexual men were going to be further stereotyped, further marginalized, further demonized. The negotiations of the partnership, for me, were so unbelievably poignant in the imbalance of power that further separated community and researcher. Not brought us together.

Lack of Time and Human Resources ($n_2 = 10$)—CBO staff time was described as an important factor in project design. Informants felt that CBO staff may become overburdened when involved in research and job responsibilities at the same time.

It involved a lot of meeting time, a lot of staff resources. We had to pull staff who do a lot of things to help implement the survey. So someone who normally did administrative work, someone who was normally a case manager, someone who was normally an outreach worker would be pulled to help implement the survey.

It can be very frustrating when it takes our staff resources to make a project happen, and yet we're not reimbursed for that. And some universities have high overheads and it's just not sufficient funding to be able to give support to the agency. I think if it's going to be a true collaboration, there should be some notion that this is labor intensive and costly for us, and those factors need to be part of deciding the budget.

Lack of Information Sharing ($n_2 = 6$)—Informants discussed their concerns about researchers not sharing information, including the results of research done in and with their CBOs.

I can't even get a copy of what [the researcher] wrote. I asked for it. I told her I wanted to continue the program, to see if I could get some intermediate funding. She sent me some of the literature review. But no program plan. So truthfully, I just stopped asking.

You know, [results] help to define what's working, what's not working. And I think that there should be more of that, sharing of results.

We want to know your results. We want to read and to learn from them. Probably the majority of the evaluations that we've been involved in, nobody sent us the finished product.... And I think researchers should do it.

Characterizing Low and High Research Collaboration

Informants revealed that collaboration varies in different research projects as affected by the factors they identified. Once informants had characterized what made one project highly collaborative, they were better able to characterize what made the other less collaborative. They focused primarily on the absence of motivators or facilitators and on the presence of barriers revolving around issues of staff time, concerns about distribution of resources, and ownership of the research. Brief narratives were compiled, linking the factors identified above while characterizing contrasting collaborative experiences in the two projects described by one informant. Although informants provided personalized descriptions, the CPP agreed that the narratives below clearly represented the overall sensibility expressed by all informants.

High-Collaboration Project

What was successful about that partnership was that staff and clients participated actively.... It was important that they had a lot of communication, and that everyone was involved in all levels. The researcher had knowledge about the challenges we faced in the agency.... Something that was very helpful was a prior relationship.... The other thing that I think worked was finding together the research topics.... I think that the partnership can be constructed with targeted efforts.... The element of trust was present.... I think that is very important to expose people in CBOs to entry-level opportunities with university researchers concerned about community-based research.... We were informed, and everybody was excited, I even have a copy of the published results.... And at the end, there was a general presentation for the group—ownership!

Low-Collaboration Project

When we began meeting, we found out that it was an extraordinarily burdensome demand on us. The researchers wanted us to administer a 20-page questionnaire.... We were supposed to ask our participants, "How many sexual partners have you had in your entire life?" It was intrusive, and our staff didn't like it.... The negotiations of the partnership were poignant in the imbalance of power.... It was a torturous process that further separated community and researcher.... From the beginning, I realized that the researcher wanted so much control.... We proposed everything, and then we had to fight for the rights of authorship, rights of capacity, the right to a very large amount of data that was going to be collected.... The researcher was interested in numerical things ... we were more interested in the contextual situation.... We never heard anything about the research results.... I think it would be very empowering to the organization to know the results.

DISCUSSION

The text depicting high collaboration conjures up a type of experience where there seemed to be partnership synergy (Lasker et al., 2001) between CBO and researcher collaborators, a form of collaboration that valued lay and scientific knowledge equally and strived to integrate these knowledge sets and skills to distribute research-related tasks among all collaborators. CBO informants identified 16 factors that may characterize the degrees of collaboration in different

HIV-prevention research projects. These factors comprise four domains of reference: (a) Researchers' Characteristics; (b) Collaborative Research Characteristics; (c) Community Partner–Researcher Relationships; and (d) Barriers to HIV-Prevention Research Collaboration.

In the Researchers' Characteristics domain, informants identified specific traits—expertise, availability, social skills—that characterized researchers who embodied the qualities they sought in research partners and with whom they would prefer to work in the future. Informants' narratives indicated that researchers from resourceful (i.e., financially and intellectually) and reputable institutions could help their CBOs further their agendas and realize their missions. Resourceful and reputable institutions were perceived as adding credibility and reputation to CBOs, making researchers from this type of institution more desirable. The specificity of these factors is a major contribution to this body of knowledge, clarifying what CBOs expect from researchers and their institutions and providing guidance for researchers' conduct in collaborations (Abramson & Misrahi, 1996; Kegeles et al., 2005; Pinto et al., 2008).

The Collaborative Research Characteristics domain reflects informants' poignant data on values previously described in the community participatory literature (Israel et al., 1998; Minkler & Wallerstein, 2003). Informants contended that collaborative research, which is preferred and more likely to engender CBO involvement, ought to have clear purposes defined in partnership, ought to involve CBO staff and research participants in decision making, ought to allow for CBO staff to expand their knowledge base, and ought to improve services provided by the CBO. These priorities, expressed in the voices of community partners, add credibility to a developing body of knowledge about factors that influence collaborative research (Griffin & Floyd, 2006; Grinstead et al., 1999; Harper & Salina, 2000; McKay, Pinto, et al., 2007; Radda et al., 2003; Vander Stoep et al., 1999; Ziff et al., 2006). Researchers can strengthen collaborations by upholding and supporting these values.

The Community Partner–Researcher Relationship domain suggests that the development of social and professional relationships between CBO representatives and researchers is a foundational element of collaborative research. This condition can be easily understood in light of the history of abuse of racial and ethnic minority research participants and misuse of research data to describe at-risk communities (Biafora et al., 1993; Stevenson & White, 1994; Thomas & Quinn, 1991; Wyatt, 1997). Solid professional relationships may tip the imbalance of power between researchers and communities, so that trust around major issues in HIV-prevention research—researchers' interpretations of sexual practices, drug use, confidentiality, and consent—can be restored (Ochocka, Jansen, & Nelson, 2002; Pinto, Schmidt, Rodriguez, & Solano, 2007).

The Barriers to HIV-Prevention Research Collaboration domain comprises challenges to collaboration: social and cultural disconnects between CBOs and researchers, lack of information sharing, time constraints, and CBOs' lack of research experience. All these reflect what has been discussed in the collaborative-research literature (Harper & Carver, 1999; Kegeles et al., 2005; Vander Stoep et al., 1999). Social and intellectual disconnects between CBOs and academics appear to create miscommunications between them. This may hinder CBOs' abilities to develop collaborative relationships, namely, “getting to know each other” and “resolving social and professional tensions.” These tensions have been discussed in the literature as imbalances of power between researchers and community partners concerning ownership in research projects, rigid methodologies, time spent on research, and how money ought to be spent (Gomez & Goldstein, 1996; Hardy & Phillips, 1998).

Informants suggested that few researchers share results of research, even though it is essential for CBOs to obtain and use them for programmatic purposes (e.g., identifying risk behaviors,

designing new services, seeking funding). This is related to informants' concerns about improving the knowledge base of CBO staff, the services they provide, and the CBO infrastructure. It appears that meaningful collaboration asks researchers to devote more time to staff training and CBO capacity building (Clark & McLeroy, 1995; Conner, Takahashi, Ortiz, Archuleta, Muniz, & Rodriguez, 2005). If a balance is not achieved among CBO time, human resources, and the researcher's direct involvement with a research project, it may indeed discourage CBOs from collaborating in HIV-prevention research.

This study has a small sample size, making it difficult to generalize its findings to other contexts. However, if we consider the number of informants (Table 1), whose data matched identified factors as proxies for the salience of those influences, we can project that in HIV-prevention collaborative research, some influences will be more important than others. Therefore, future research ought to employ larger samples to determine the relative importance of diverse influences on collaboration in research about different diseases, including barriers to collaboration. The data for this study were collected locally from key informants with extensive HIV-prevention research experience. Other influences may be identified in future research with informants with different histories of collaboration in research about various other diseases and conditions. It will be necessary to involve informants with little or no research experience to examine differences in their priorities, values, and overall agendas. Nevertheless, this study uncovered four domains of reference and respective factors that influence HIV-prevention research, which can inform collaboration efforts in other types of public health research. In addition, it demonstrated differences in degrees of collaboration in research. More sophisticated comparative and predictive analyses may now be built on this knowledge.

Implications for Practice

To advance knowledge about what influences collaborative HIV-prevention research, contrasting data on informants' experiences were analyzed with a team of community service providers. To disseminate these findings, a comprehensive document with preliminary findings and recommendations has been distributed to each participating CBO as soon as data analysis was completed. Preliminary findings have been presented locally to CBOs and researchers. A user-friendly summary of the findings will be available to all CBOs listed by NYCDHMH. CBOs will thus have a user-friendly version of the findings to guide their collaborative endeavors, to specify expectations when working with researchers, and to develop agency policies and mission statements that reflect a collective view of how collaborative research ought to be pursued.

Following CBO prioritization, this project helped classify specific factors that may influence collaboration, which had not been systematized from the perspective of CBO representatives. Emphasis on close collaboration contributed to making the findings useful to the praxis of researchers, CBOs, and policy makers as follows. These findings can help CBOs develop data-driven policies to guide their involvement in research. Researchers may now develop collaborative health research that fully expresses the perspectives of CBOs. CBO and researcher ought to value equally their time, expertise, needs, and priorities so as to strike a meaningful integration of lay and scientific knowledge. Consistent with the data, high collaboration makes the research more useful to CBOs and the clients they serve. Grounded in the results, policy makers may further prioritize funding of research that more closely adheres to what CBOs define as collaborative.

Although this study focused on HIV-prevention research, the results may help direct any health research collaboration. The factors identified here may be used to adjust and modify the collaboration to achieve the specific objectives of research on different diseases or health conditions. Although specific barriers to collaboration were identified, it is important to

highlight that in the actual work with community partners, the absence of any or all facilitating factors discussed above can itself turn into a barrier to collaboration. These must be addressed as soon as they are identified to maintain a degree of collaboration consistent with the needs of all collaborators. It behooves all collaborators to set aside time for social activities and professional development beyond the scope of the project (e.g., trainings and conferences). This may help collaborators to develop a shared understanding of one another's strengths and limitations, to generate more flexibility, and to exchange the social support needed to strengthen the ties between community and researcher.

APPENDIX

Codebook Summary: Influences on Community-Based Organization (CBO) Collaboration in HIV-Prevention Research

Domains	Definitions of Factors
Researchers' Characteristics	Comments about researchers' expertise, availability, and social skills Comments about the researchers' institutions in terms of their financial and intellectual resources and reputation
Collaborative Research Characteristics	Comments about the purpose of the research and the ability of the research to enhance participants' lives and improve HIV services and CBO infrastructure, CBO staff skills, and knowledge base
Community Partner–Researcher Relationship	Comments about relationship building and processes on resolving social and professional tensions
Barriers to HIV-Prevention Research Collaboration	Comments about hindrances to collaboration, including differences between CBO and academia in terms of priorities and values, CBOs' lack of funding and experience, and lack of information sharing

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Table 1Influences on CBO Collaboration in HIV-Prevention Research ($n = 20$)

Domains and Factors	n_1	n_2 (%)
Researchers' characteristics	17	
Personal		
Expertise		14 (82)
Availability		11 (65)
Social skills		7 (42)
Institutional	8	
Financially and intellectually resourceful		8 (100)
Reputable		8 (100)
Collaborative research characteristics	15	
Ought to improve services and CBO infrastructure		15 (100)
Ought to have a purpose defined by all partners		13 (87)
Ought to involve participants and enhance their lives		13 (87)
Ought to involve CBO staff		12 (80)
Ought to improve knowledge base of CBO staff		12 (80)
Community partner–researcher relationship	13	
Getting to know each other		
Resolving social and professional issues		
Barriers to HIV-prevention research collaboration	12	
Lack of CBO experience in research		12 (100)
Cultural and social disconnect between CBO and academia		11 (92)
Lack of CBO time and human resources		10 (83)
Lack of information sharing between partners		6 (50)

NOTE: CBO = community-based organization; n_1 = number of key informants whose comments matched domains definitions; n_2 = number (%) of key informants who identified specified factors.