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Perceptions That Influence the Maintenance of Scientific Integrity in Community-Based Participatory Research

Anne E. Kraemer Diaz, MA¹, Chaya R. Spears Johnson, PhD^{1,3}, and Thomas A. Arcury, PhD^{1,2,3}

¹Department of Family and Community Medicine, Wake Forest School of Medicine, Winston-Salem, NC

²Wake Forest University Translational Science Institute, Wake Forest School of Medicine, Winston-Salem, NC

³Center for Worker Health, Wake Forest School of Medicine, Winston-Salem, NC

Abstract

Scientific integrity is necessary for strong science; yet many variables can influence scientific integrity. In traditional research, some common threats are the pressure to publish, competition for funds, and career advancement. Community-based participatory research (CBPR) provides a different context for scientific integrity with additional and unique concerns. Understanding the perceptions that promote or discourage scientific integrity in CBPR as identified by professional and community investigators is essential to promoting the value of CBPR. This analysis explores the perceptions that facilitate scientific integrity in CBPR as well as the barriers among a sample of 74 professional and community CBPR investigators from 25 CBPR projects in nine states in the southeastern United States in 2012. There were variations in perceptions associated with team member identity as professional or community investigators. Perceptions identified to promote and discourage scientific integrity in CBPR by professional and community investigators were external pressures, community participation, funding, quality control and supervision, communication, training, and character and trust. Some perceptions such as communication and training promoted scientific integrity whereas other perceptions, such as a lack of funds and lack of trust could discourage scientific integrity. These results demonstrate that one of the most important perceptions in maintaining scientific integrity in CBPR is active community participation, which enables a co-responsibility by scientists and community members to provide oversight for scientific integrity. Credible CBPR science is crucial to empower the vulnerable communities to be heard by those in positions of power and policy making.

Keywords

community-based participatory research; conflict of interest; research integrity; scientific integrity

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Corresponding Author: Anne E. Kraemer Diaz, Department of Family and Community Medicine, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157, USA. anne.e.kraemer@gmail.com.

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Scientific integrity is absolutely essential for the good practice of all scientific endeavors (Drenth, 2010). Although no simple definition captures the complexity of scientific integrity, the Panel on Scientific Responsibility and the Conduct of Research (1992) defines it as the “adherence by scientists and their institutions to honest and verifiable methods in proposing, performing, evaluating, and reporting research activities” (p. 4). Scientific integrity also reflects the ethical obligation for scientists and institutions:

... integrity embodies above all the individual’s commitment to intellectual honesty and personal responsibility ... moral character and experience. For an institution, it is a commitment to creating an environment that promotes responsible conduct by embracing standards of excellence, trustworthiness, and lawfulness. (Institute of Medicine National Research Council of the National Academies, 2002, p. 4)

The European Science Foundation (2011) identified specific principles as the underpinning for scientific integrity, including honesty, reliability, objectivity, impartiality, open communication, duty of care, fairness, and responsibility for future science generations.

However, every investigator confronts threats to scientific integrity. Some threats are competition for funds, pressure to publish, commercialization, and career advancement (Drenth, 2010). The frequency of scientific misconduct, such as data falsification, fabrication, and plagiarism occurs from 0.1% to 1.0% in the literature (Steneck, 2006, 2007), and is suggested to be increasing (Drenth, 2010, 2007). In the United States, studies suggest misconduct could involve as many as 1 in every 100 researchers (Steneck, 2006).

While the majority of science that is undertaken follows the traditional path with scientists in control of research, more recent approaches, such as community-based participatory research (CBPR), provide a different context for scientific integrity. CBPR is an equitable partnership between professional and community investigators in all aspects of the research process, including definition of research questions, data collection and analysis, and interpretation and dissemination of findings, while co-sharing all responsibilities in the endeavor (Israel et al., 2005; Viswanathan et al., 2004; Wallerstein & Duran, 2006). This equal partnership leaves behind traditional academic hierarchies (Minkler, 2004). The shift in power sharing builds trust (Holkup, Tripp-Reimer, Salois, & Weinert, 2004; Wallerstein, 1999) and mitigates the knowledge imbalances between professional and community investigators (Leung, Yen, & Minkler, 2004). It is an approach to research that enables investigators to obtain internally valid, culturally specific insights into the environmental and social contexts surrounding health and disease of minority and vulnerable communities by involving the community in the research process. One of the main tenets of CBPR is action toward social change in the community along with the production of knowledge (Minkler & Wallerstein, 2003). While several sets of principles and guidelines for CBPR exist for forming collaboration (Blumenthal, 2011; Green et al., 1995; Israel et al., 2005; Viswanathan et al., 2004), no one standard exists for evaluating CBPR practice.

At the same time, concern about scientific integrity in CBPR projects is growing (Hueston et al., 2006; Minkler, 2004; Wallerstein & Duran, 2006). Three areas of concern for CBPR scientific integrity have been discussed: (a) different amounts of methodological and

research training by team members; (b) availability and access to resources such as time, equipment, and money for team members; and (c) variability in agendas, expectations, and norms associated with each team member's community, discipline, and culture (Cargo & Mercer, 2008; Horowitz, Robinson, & Seifer, 2009; Minkler, 2004; Quandt, Arcury, & Pell, 2001). These concerns could limit the validity and utility of CBPR. For example, if team members have limited time, this could affect their participation in the process and thus negatively affect the study. Methods that have been suggested to maintain and improve scientific integrity in CBPR are the implementation of rigorous research methods, open communication between team members, clear definition of team members' roles, promoting talents of each team member, promoting colearning that creates balance, and promoting discussion of the needs and interests of all involved emphasizing compromise (Buchanan, Miller, & Wallerstein, 2007; Cargo & Mercer, 2008; Wallerstein & Duran, 2006).

Understanding the perceptions that promote and threaten scientific integrity in CBPR identified by professional and community investigators provides insight on problem areas for investigators and aspects that could be implemented to maintain scientific integrity. The wide variation present in the implementation and definition of scientific integrity in CBPR among professional and community investigators highlights the importance of identifying barriers and facilitators to scientific integrity (Kraemer Diaz, Spears Johnson, & Arcury, 2013). This article explores perceptions that promote and discourage scientific integrity in CBPR among a sample of professional and community CBPR investigators.

Method

We used a qualitative design to understand perspectives on scientific integrity for CBPR investigators conducting projects in nine states in the southeastern United States. In-depth interviews were held with professional and community investigators from 25 different projects in 2012. The research protocol was approved by the Wake Forest School of Medicine Institutional Review Board and all participants provided signed consent.

A list of current CBPR projects in the southeastern United States (Virginia, Kentucky, North Carolina, South Carolina, Georgia, Florida, Mississippi, Alabama, Louisiana, Puerto Rico) was compiled from the NIH Reporter (<http://projectreporter.nih.gov/reporter.cfm>) and the Centers for Disease Control and Prevention Research Centers (<http://www.cdc.gov/prc/>). Projects were identified if their abstracts indicated funding, at least in part, to conduct CBPR. From the list of 121 projects, 50 projects were identified and the contact principal investigators (PIs) were invited to participate in the study. From the 50 PIs we contacted, 9 failed to reply, and 8 declined to participate (Table 1). Of the 33 who expressed an interest in participating, 1 agreed to participate but was later unable due to a natural disaster, 2 were early in their development, 2 projects were located in communities geographically located outside the Southeast, although the institution that employed the PI was located in the Southeast, and 3 accepted after the goal of 25 had been achieved. Eleven projects focused on largely African American communities, nine focused on communities of mixed ethnicities, and five focused on immigrant or refugee populations.

The contact PIs (all professional investigators) were asked to complete an interview and suggest two team members to complete interviews, at least one needed to be a community investigator. All participants were at least 18 years old and fluent in Spanish or English. Project participants included three groups: 31 professional investigators, professionally trained in research, who work in academia, a nonprofit, or practice-based research networks; 10 academic–community liaisons, community members employed by the university; and 33 community investigators, with diverse backgrounds in research training, involved as an individual or from a community-based organization (Table 2). Partnerships between professional and community projects ranged from 1 to 13 years (mean = 6.6 years).

Data Collection

All data were collected using in-depth, semistructured interviews. Interviewers traveled to each participant for the interview but for one, which was conducted via telephone. Each interview consisted of questions regarding experience with CBPR, perspectives on CBPR and scientific integrity, and general questions about educational and occupational background. Participants were asked to share suggestions on the format and content of future CBPR-specific education modules. Participants received a \$20 incentive. The development and subsequent reviews of the interview guide was aided by the project advisory committee (composed of 15 CBPR investigators from outside the southeastern United States), and five pilot interviews. During data collection, project investigators reviewed the interview recordings and discussed variations or deviations from the interview guide.

A common definition was necessary to understand the threats and facilitators to scientific integrity in CBPR. All participants were asked for their own description of scientific integrity and then were provided with a description of scientific integrity characteristics provided by the National Institute for Environmental Health Sciences (NIEHS; Kraemer Diaz et al., 2013). This description stated:

proper adherence to responsible research practices. That includes use of honest and verifiable methods of proposing, performing and evaluating research and reporting research results ... [R] research conducted with scientific integrity emphasizes adherence to the rules, regulations, guidelines and commonly accepted professional codes or norms that direct collection and interpretation of data from societies, organizations, groups, and individuals. (NIEHS, 2010)

All interviewed participants accepted the description, even though some raised questions about “commonly accepted codes or norms” and if norms were from professional investigators or community representatives.

Analysis

All interviews were audio recorded, transcribed verbatim, and edited for accuracy and to remove identifying personal information. Team members identified patterns, perceptions, and issues present in the narratives that were then discussed by the team as the basis for the coding dictionary. At least two research team members coded each transcript. All transcripts were subjected to saliency analysis with the aid of Atlas.ti qualitative data analysis software

(ATLAS.ti Scientific Software Development GmbH, Berlin, Germany). Saliency analysis consisted of reviewing thematic patterns across all interviews and evaluating the recurrent perceptions based on frequency of recurrence, descriptive capacity of the perception recognized by the research team, or participant's emphasis on the perceptions (Buetow, 2010; Arcury, Quandt, & Pell, 2001). Each participant may not have discussed salient perceptions; however, they were discussed in detail and with emphasis throughout the sample or were found to provide insight or explanation of a given phenomenon. Through this iterative process, quotations that demonstrate the barriers and facilitators of scientific integrity in CBPR were identified and analyzed. Noted perceptions were listed according to frequency, participant's emphasis, and explanatory capacity. In our results, we have only included the perceptions that were both important and recurrent.

Results

Participants explained the perceptions that promote and discourage scientific integrity in CBPR. Perception salience varied by team member identity as professional or community investigators; however, the overall perceptions were similar between the two groups (Table 3). Perceptions that promote and discourage scientific integrity in community-based participatory research are follows:

- External pressures
- Community participation
- Funding
- Quality control and supervision
- Communication
- Training
- Character and trust

External Pressures

One of the most recurrent perceptions for CBPR scientific integrity among professional and community investigators were external pressures that could affect scientific integrity. These pressures manifested in different ways.

Professional investigators explained that CBPR made it inherently more difficult to advance as an academic. The long-term commitment and slow-moving nature of CBPR placed publication, tenure, and further grant awards at risk. These pressures could lead to the manipulation of results in order to publish or seek full funding following pilot studies. CBPR was viewed as a particular concern for junior and midlevel faculty investigators as its slow nature could be a risk to their careers. There was also pressure of the dual obligation for professional investigators, which was maintaining the commitment to the scientific community and being active in creating change in the research community. Professional and community investigators noted the pressure to manipulate data to reflect a better outcome, to create an outcome instead of a null result, or for an outcome that created community buy-in.

Community investigators expressed concern about external pressures professional investigators confronted that directly affected CBPR scientific integrity. The common concern was the pressure professional investigators have to publish to promote their career. While community members understood the need for publication and dissemination of results, they believed that publication pressures could lead professional investigators to publish without community input and interpretation or the manipulation of data. Community members linked professional investigators' need for career advancement as their focus rather than community needs. Community investigators explained that external pressures pushed professional investigators to have control over many aspects of the project especially data collection, data ownership, and data analysis.

Community Participation

Community investigators felt that scientific integrity was maintained when the community had more ownership and participation. This occurred through open communication, with team members having opportunities to share ideas and opinions, and valuing the community investigators' expertise even though their research training differed from that of the professional investigators. However, when professional investigators did not return results to the community or communicate about the project's progress in a timely fashion, community investigators saw this as a lack of trust and a threat to scientific integrity.

Funding

The lack of funding was a primary concern for scientific integrity. This could inhibit the ability to do the research correctly. A lack of financial support threatened scientific integrity because it increased the possibility to manipulate data by professional or community investigators. Community investigators explained that without sufficient funds to pay staff appropriately, the data collection and overall research protocols were at risk. Insufficient salaries or reimbursement for expenses meant community investigators were not able to work. It was important to provide the community-based organizations with enough money to make the investment of time and resources worthwhile.

Control of finances was another threat to scientific integrity. Professional investigators discussed that it was vital to provide enough support to the community-based organizations in order to have buy-in, while at the same time dispersing it fairly to different people and groups in the project. It was also important to acknowledge the large power differential that often professional investigators had because they controlled the funding source.

Quality Control and Supervision

Overseeing quality control in large CBPR projects was perceived as a serious threat to scientific integrity. Supervision of academic and community staff was necessary and each had different risks to consider. Professional investigators explained that it was very difficult to know when to relinquish control and when to micromanage. Specific concerns focused on community members falsifying data due to pressures to meet deadlines or quotas, having academic project managers in charge of research functions, trusting a community staff member to be in charge of research, and relinquishing power to community partners who did not share the same background, research training, education, or experience of professional

investigators. Professional investigators also explained that providing feedback and oversight could come across as too critical, so it was important to empower the community while also having rigorous quality control standards. Professional and community investigators explained that it was important to have the professional investigator as an active part of the project, not just a figurehead managing from afar.

Communication

Professional investigators explained that communication with all team members was important for maintaining scientific integrity in a CBPR project. This did not mean informing but rather engaging and involving the community. Good communication was built from mutual respect, shared work balance, and formal agreements. When communication was fluid and formal agreements were in place describing the data collection protocol, team member roles, data storage and data sharing, dissemination, and financial transparency, investigators explained that they had a strong foundation for scientific integrity.

Training

Training was identified as important for maintaining scientific integrity. Professional investigators acknowledged that training community and academic staff was a vital part of obtaining good data. If community members were not well prepared, they could start data collection at the wrong times, do it incorrectly, and put the study at risk. It was emphasized by community investigators that training was not a onetime activity, but ongoing throughout research to facilitate learning and scientific integrity. The majority of community investigators agreed that community members did not have the background to direct research, but that did not mean they should not be involved. Rather, professional investigators needed to train community members how to participate as investigators. Community investigators felt a classroom setting was beneficial but hands-on experiential training was just as important. Importantly, training was not unidirectional; community investigators felt that they must teach professional investigators the proper behavior and customs of the community.

Character and Trust

Maintaining scientific integrity for community investigators was founded on the character of the team members. Community investigators believed that working with people of integrity focused on a common goal helped maintain trust, ethics, and scientific integrity. Part of trust was built on communication and information sharing. Professional investigators must share information with the community to build trust. For community investigators, trust between professional and community investigators translated into successful projects that maintained scientific integrity.

Discussion

Professional investigators confront risks and pressures when undertaking scientific research, and maintaining scientific integrity is vital to the credibility of science (Drenth, 2010). Professional investigators identified external pressures as the main barrier to scientific integrity in CBPR and traditional research (Drenth, 2010; Minkler, 2004). Publishing,

obtaining new research funding, and career advancement are real pressures professional investigators experience, but that are often not placed on community investigators. These pressures are real and difficult. They promote traditional research structures, which leave out community collaboration. In traditional research, professional investigators make project decisions; however, CBPR attempts a paradigm change to share power between professional and community investigators (Israel et al., 2005; Leung et al., 2004; O'Fallon & Dearth, 2002; Savage et al., 2006). Yet external pressures discourage CBPR scientific integrity by undermining the foundation of CBPR: community participation.

The community investigators' perception demonstrated that community participation was paramount and could promote or discourage CBPR scientific integrity. Community participation was also identified as necessary in the definition of CBPR scientific integrity (Kraemer Diaz et al., 2013). The coinvolvement by professional and community investigators in the major components of research projects is fundamental for CBPR (Israel et al., 2005; Minkler, 2004). Community investigators' role in data collection, data management, analysis, and publication is as necessary as the professional investigators. However, the actual participation of community partners in CBPR varies greatly.

Nevertheless, it is the involvement of community investigators that Mitcham (2003) described as co-responsibility by scientists *and society* in the oversight of scientific integrity. Mitcham (2003) explains that scientists cannot be the only ones responsible for scientific integrity since scientific projects can greatly affect society. Ethics and integrity are meaningful only when applied and discussed between everyone who can be affected by the results. Having professional and community investigators (science and society) performing oversight of science provides the best situation for scientific integrity.

Positive and frequent communication was identified by professional and community investigators as critical to promote CBPR scientific integrity. Communication is a principle of scientific integrity by the European Science Foundation because it enables discussion with other scientists and sharing with the public (Drenth, 2009). Communication and trust have been identified as important components of CBPR (Cargo & Mercer, 2008; Kraemer Diaz et al., 2013) and are part of the process of cosharing projects in CBPR (Holkup et al., 2004; Wallerstein, 1999). Strong communication enables coresponsibility between both partners for each project step.

For professional investigators, their supervision and quality control of a project was important to maintaining scientific integrity. Relinquishing control of a project was difficult for fear that the scientific integrity would suffer. To do CBPR and ensure strong oversight and quality control, professional investigators must communicate well and invest in training for community investigators. Training in all aspects of research provides a foundation for trust and enables the community investigators to participate fully in the project. Full participation of professional and community partners enables the co-responsibility in the oversight of scientific integrity that should be inherent in CBPR projects (Mitcham, 2003).

Ideally, CBPR is well positioned to promote co-responsibility of scientific integrity. Yet community members identify their lack of participation as a main barrier to scientific

integrity in CBPR. Without the participation of community investigators in the science, scientific integrity is jeopardized. This may negatively affect not only CBPR projects but also the populations involved in the research and the CBPR approach. Full participation of professional and community partners enables the coresponsibility in the oversight of scientific integrity (Mitcham, 2003) that should be inherent in CBPR projects. Uniquely, CBPR is in the position to strengthen science by improving the rigor, relevance, and reach of research and the scientific enterprise (Balazs & Morello-Frosch, 2013).

The study should be evaluated in light of its limitations. This is a qualitative study based on a nonrandom sample. Because of the structure of funding databases only the contact PIs were listed, they were always professional investigators. This could have biased recruitment, as it limited direct entry contact to the professional investigators. However, analysis was conducted among a diverse group of carefully selected projects with participants including investigators in the professional and community realms in nine states that provide a good foundation for a broader investigation. Few studies have considered how professional and community members view scientific integrity CBPR.

Conclusion

The perceptions that promote and discourage scientific integrity in CBPR identified by professional and community investigators reveal that the real and ideal in CBPR are still a work in progress for the majority of projects (Kraemer Diaz et al., 2013). Understanding the perceptions that promote and discourage CBPR scientific integrity can lead to better scientific integrity and support for the CBPR approach. These results demonstrate that the overall most important perception in maintaining scientific integrity in CBPR is *active* community participation. Participation cannot only be idealized; it must be realized through training, shared funding, and community trust and engagement at every step, including oversight of scientific integrity.

CBPR is a political activity that addresses threats to vulnerable populations who do not have the power to access resources like health care. Credible, scientific CBPR is a means by which vulnerable voices can be heard and taken seriously by those in positions of power and policy making. Consequently, it is vital to understand the perceptions that promote and discourage scientific integrity within the particular context of CBPR. The perceptions clearly show that scientific integrity can be maintained and enhanced through the participation of the community that is facilitated by communication and trust, coupled with training, which enables the co-responsibility for scientific integrity. It is the co-responsibility of scientific integrity that ensures CBPR projects truly are reflections of and directed toward what is best for the community and for science.

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Table I

Sample Disposition.

Disposition	<i>n</i>	Percentage
No response	9	18
Declined/too busy/lost to follow-up	8	16
Ineligible due to project location	2	4
Ineligible due to project stage	2	4
Agreed after sample finalized	3	6
Lost due to natural disaster	1	2
Included in sample	25	50
Total number of eligible participants	121	

Table 2

Participant Affiliation and Role.

Affiliation and role	<i>n</i>	Percentage
Academic staff		
Principal investigator	25	34
Investigator	5	7
Project manager	1	1
Academic-community liaisons	10	14
Community staff		
Principal investigator	4	5
Investigator	13	18
Project manager	4	5
Community worker	12	16

Table 3

Quotes About Perceptions That Promote and Discourage Scientific Integrity in CBPR.

Perception	Quote
External pressures	<p>As an academic and looking at it from the academic side there's so many pressures to remain an active investigator: you've got to get funding and to get funding you've got to get results out and papers out. And so the push from the academic side to get the papers out without regard, necessarily, to the perception of the community or its impact, perhaps a negative one. I think it is a clear pressure particularly on younger investigators. And younger now means people in their mid-career—just a reality ... and one that has to be protected. (Professional PI 21)</p> <p>[T]here's the hopes that the information would then produce a positive outcome, or at least shed light on a certain condition. I mean there's obviously the other side of things, "well, the more published I am, the more that I get to have a higher position at this university, and before long, I'm making big money. And I'm not real concerned about my survey in terms of the people. I've been published now." (Community Investigator 1)</p>
Community participation	<p>I think the more ownership opportunity that people have to contribute makes the science, the integrity of a project that much better, stronger ... And then for them to have a voice,... Everybody has to have a voice, good, bad, or ugly ... (Academic-Community Project Manager 11a)</p> <p>Already there's some discrimination that starts because not all community members have that scientific background and because this is solely driven by scientific research already the researchers are going to have sort of like an oversight on everything ... But what we encourage community members, what we always tell them they're self-empowered because self-empowerment is a very important tool in organizing. We tell them this is a study designed by you guys. Even if they (professional investigators) have a master's or a PhD they don't know shit about how to navigate the waterways. You bring the expertise ... Don't be afraid to voice your opinions. So like a self-empowerment tool is also very important. But like the role's already—it's already divvied up. But I feel like it's more important to encourage community members to participate and also empower them to take on a bigger role, or know that they have a big role. (Community Investigator 23)</p>
Funding	<p>Well, you know, if they're (finances) not shared among the partners, there's certainly a possibility of a power differential and, more control resting on the partner that has the financial resources. (Professional PI 11)</p> <p>[D]epending upon the allocation of funding. If the people on the ground are funded sufficiently to get the job done, yeah I think you have a greater chance of adhering to scientific integrity. I think if you really aren't funding the project appropriately, you increase the stress level with the people on the ground and you're going to run in bigger challenges. That's why I think the financial aspect becomes important. Like if they can't travel. [F] or instance, one of our community health centers covers a very large territory.... So we have to make sure that there are travel funds for mileage reimbursement.... So we can't get stingy. You know we can't tell her you can't go here or you can't go there and still hold her accountable for recruiting X number of participants. (Community Project Manager 4a)</p>
Quality control and supervision	<p>With each level of delegation I think the understanding of the scientific process and the rigor is lessened. [W]e've delegated to XX. And XX isn't coaching; she's having the coaches coach ... with each layer of that, we're losing more control and more understanding of what's actually happening on the ground. And because this study is so gigantic ... because we're under budgeted, we can't handle doing the quality control for the coaching here so our local partner is doing the quality control. And I think in this case that's okay, because ... XX knows it deeply, but now you know what, starting in two, three weeks, we're going to have a different person supervising the coaches. And she doesn't have a college degree ... to have her in charge of the whole thing kind of scares me. (Professional PI 9)</p> <p>[S]ometimes I would see that researchers, they will get their studies funded, and then they will pass it on to a research coordinator or to their staff, and they really don't do much as far as supervising, keeping an eye on things ... yeah, you have good staff, maybe things are going to go well, but sometimes I saw that things were falling apart, I always wonder, I mean what are they going to do with this, this has nothing to do with what they said that they would be doing or how they will be doing it... But what I realized is that whether you are doing CBPR or you are doing traditional research, you cannot be in your ivory tower, you know in your office, and people are out there and you are here completely isolated and not really knowing what's going on, that you have to get your feet wet, that you have to supervise on a regular basis, and make sure that things are being done the way they're supposed. With CBPR I think it's even more important because we're incorporating now a new element which is that we are opening ourselves to the community's input. And we have to make sure that that input, as valuable as it is, doesn't compromise the scientific integrity of the things that we're doing. (Professional PI 19)</p>
Communication	<p>We are pretty collaborative in the sense that everyone attends pretty much all meetings so I think that it actually probably improves integrity because everyone knows what's going on. So the person who's scanning a form is at every meeting also so she's able to say, "These are weird things that I'm seeing" or the data collector is actually able to sit and talk to her in front of everyone about what's going on, you know what I mean? So I think that the collaborative nature actually might increase integrity because we also are collecting data that are interviewer administered but we're collecting data from large numbers of people so we have lots of people going out to the community at the same time together to meet these ... social networks of men to collect, to do their assessments. So I think that there's probably less likelihood of made-up data or insufficient consent processes ... (Professional PI 22)</p>
Training	<p>Yeah, I mean lots of training, lots of practice, tight quality control ... so we tape record their (community investigators) sessions and then we would listen,... for continuous quality improvement. But, we were rubbing people the wrong way because we were giving too much feedback and people thought that we were criticizing ... we had to learn to provide feedback in an empowering and uplifting way that praised people sufficiently, but also got the point across that they were doing certain things wrong. And when you're trying to maintain community</p>

Perception	Quote
	<p>partnerships, it's a little different than if it's your own staff. I mean you have to be nice to your staff too, but it's a little harder when you're a couple steps removed. (Professional PI 9)</p> <p>[I]t's got to be some true, ongoing educational awareness as well as experiential awareness on both parts, because I think the people, and this was something that we found early on when we were doing surveys and we had a couple of teams from memory that were just so green, and so cute and they came down and they were going to recruit and not understanding ... Language issues; you can't come down and talk like you talk to other people at XX neighborhood. You've got to think about how people need to be approached here.... It goes both ways. The people on the academic end need to really understand the community mores and follow what the community people are telling them is important and the same has to happen with the people on community end need to garner some expertise from the people that actually have the science. (Academic-Community Project Manager 9A)</p>
Character and trust	<p>I think one of the beauties of CBPR is developing trust... with the community. And I think if you don't have that trust, you can have very skewed results. I think, especially in the kinds of studies that we do in CBPR. So, for example, you could have a project where, like if you are doing urine studies, if you don't have a community that trusts what you're doing, you might only have certain kinds of people that would want to do that urine study and other people would not do it. And so that could skew your results. But I think the, the beauty of CBPR is that you can work with a community and gain the trust of that community, both in terms of having them involved in the study, but also in terms of getting the information back to them. (Community Investigator 17b)</p> <p>[I]f you don't have the community buy-in to whatever your research is. If, you really don't have who at the table being serious about the research and the outcomes and they really having the trust in you that you're really there for that and not, as they say to label them as Guinea pigs and that sort of thing, I think if the credibility, and that communication and that partnership is solidified, then I think the outcome that you get from the researchers and the community is, I mean that's like gold.... I mean because you know if they're serious about it, if they trust you and what they're telling you if they trust and what you're telling them, then it's a win-win for everybody. (Community Lay Health Advisor 15a)</p>

Note. CBPR = community-based participatory research; PI = principal investigator.